

AD-A169 844

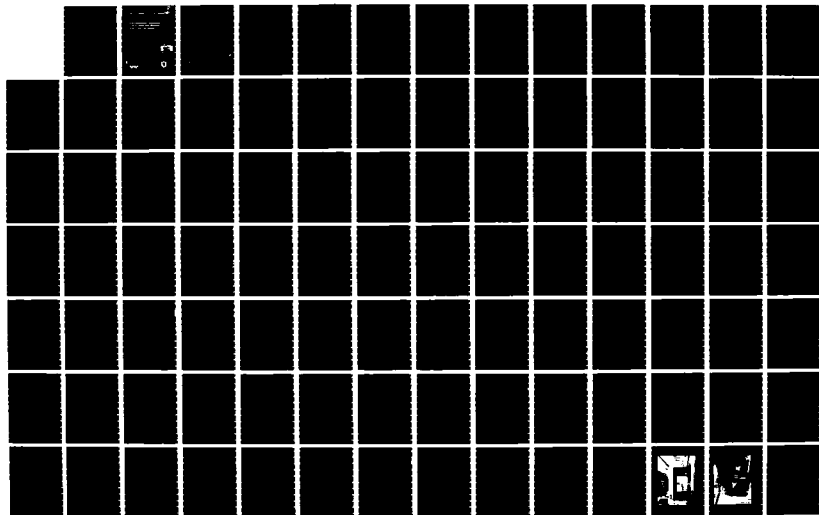
ROTOR PERFORMANCE CHARACTERISTICS FROM AN AEROACOUSTIC  
HELICOPTER WIND-TU. (U) NATIONAL AERONAUTICS AND SPACE  
ADMINISTRATION HAMPTON VA LANG. D R HOAD ET AL.  
MAY 86 NASA-L-16078 NASA-TN-87661

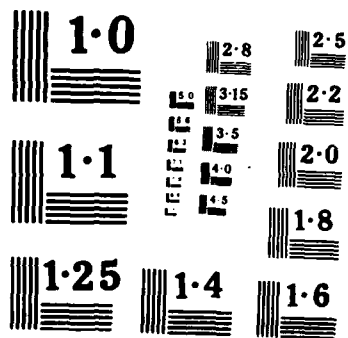
1/2

UNCLASSIFIED

F/G 20/1

NL





# Rotor Performance Characteristics From an Aeroacoustic Helicopter Wind-Tunnel Test Program

AD-A169 844

Danny R. Hoad, Joe W. Elliott,  
and Nettie M. Orie

*Aerostructures Directorate  
USAARTA-AVSCOM  
Langley Research Center  
Hampton, Virginia*



National Aeronautics  
and Space Administration

**Scientific and Technical  
Information Branch**

1986

## SUMMARY

An investigation of helicopter rotor noise at model scale has been conducted in the Langley 4- by 7-Meter Tunnel. Two rotor systems were used in this program to examine the main-rotor-only noise characteristics in preparation for a complete main rotor/tail rotor interaction study. Each rotor system had several tip configurations in order to select at least one appropriate configuration to use for the main and tail rotor tests. The rotor systems were tested at various operating conditions particularly designed to evaluate the acoustic characteristics of each rotor/tip configuration. Both acoustic and aerodynamic data were acquired during this test; however, only aerodynamic data are presented herein. The acoustic data have been reported elsewhere and properly referenced within.

## INTRODUCTION

An investigation of helicopter rotor noise at model scale has been conducted in the Langley 4- by 7-Meter Tunnel. This test was part of an acoustic program designed to develop a data base for main rotor/tail rotor interaction noise studies. The initial plans for the program were to conduct the complete main rotor/tail rotor (MR/TR) effort over a period of time that would require three tunnel entries. Phase I, conducted in the 4- by 7-Meter Tunnel, was a study of main-rotor-only noise characteristics. Two rotor configurations each having the capability for several interchangeable tips were used for this investigation. Phase II, conducted at the United Technology Research Center (UTRC), was a study of tail-rotor-only noise characteristics, with an emphasis on tail rotor/pylon/empennage installation effects. These first two phases were intended to define the main-rotor-alone and tail-rotor-alone noise characteristics in preparation for Phase III of the program. Phase III was designed to utilize the information collected in Phases I and II to select an appropriate set of MR/TR configurations and to obtain an MR/TR acoustic data base. The purpose of this report is to provide a repository of the aerodynamic data collected during Phase I.

The rotor systems used in this investigation (Phase I) were models of the U.S. Army UH-60 and Sikorsky S-76 rotors with several tip configurations. References 1 and 2 present some detailed performance characteristics of the UH-60 and S-76 rotors, respectively, for most of the tip configurations tested. A preliminary report of the acoustic results from Phase I is available in reference 3.

## SYMBOLS

The rotor axis system performance data have been resolved in the stability axis system as shown in figure 1.

- $A_1$  lateral cyclic pitch, deg
- $a_0$  coning angle, deg
- $a_{1s}$  longitudinal flapping, deg (see fig. 2)

$B_1$	longitudinal cyclic pitch, deg
$b$	number of blades (4)
$b_{1s}$	lateral flapping, deg (see fig. 2)
$c$	reference chord, in. (see table I)
$C_D/\sigma$	rotor drag coefficient, $\frac{\text{Rotor drag}}{\rho \pi \Omega^2 R^4 \sigma}$
$C_D^*/\sigma$	values of $C_D/\sigma$ in tables II through X that contain inaccuracies due to thermal drift
$C_L/\sigma$	rotor lift coefficient, $\frac{\text{Rotor lift}}{\rho \pi \Omega^2 R^4 \sigma}$
$C_Q/\sigma$	rotor torque coefficient, $\frac{\text{Rotor torque}}{\rho \pi \Omega^2 R^5 \sigma}$
$C_T/\sigma$	rotor thrust coefficient, $\frac{\text{Rotor thrust}}{\rho \pi \Omega^2 R^4 \sigma}$
FM	rotor figure of merit
$M_{AT}$	advancing tip Mach number
$r$	radial position along blade, ft
$R$	rotor blade radius, in. (see table I)
$V_\infty$	free-stream velocity, knots
$V_\infty^*$	free-stream velocity for particular rotor configuration where blade-vortex interaction noise is maximum, knots
$x, y$	planform definition coordinates for parabolic tip, in.
$\alpha_s$	rotor shaft axis angle of attack, deg
$\alpha_{TPP}$	rotor tip-path-plane angle of attack, deg
$\theta_C$	rotor collective pitch angle, deg
$\Omega$	rotor rotational speed, rad/sec
$\rho$	free-stream density, slugs/ft <sup>3</sup>
$\mu$	rotor advance ratio
$\sigma$	solidity, $bc/\pi R$

## MODEL AND APPARATUS

The general rotor model system (ref. 4) was used in the Langley 4- by 7-Meter Tunnel for this investigation. The fuselage, approximately 0.9 model rotor diameter in length, enclosed the basic model hardware, transmission, and controls for the rotor system. Photographs of the model system in the tunnel test section are shown in figure 3. Models of the UH-60 and the S-76 rotors (0.17 scale and 0.21 scale, respectively) with several interchangeable tip designs each were mounted on a fully articulated hub and used in this test. The dimensional and design characteristics of these two rotor systems are provided in figure 4 and table I. The tip configurations tested are defined in figure 5 with additional details on the parabolic tip for the UH-60 rotor provided in figure 6.

The rotor hub was fully articulated, with cyclic and collective pitch of the blades controlled by a swash plate driven by remotely controlled actuators. Blade flapping and lead-lag angles were measured at the flapping hinge offset. The rotors were driven by two 90-hp electric motors through a shared transmission. The entire system - rotor, transmission, and motor - was mounted on a six-component strain-gauge balance to measure rotor forces and moments. The model was mounted on a special model sting (fig. 3) that permits the angle of attack and angle of sideslip to be varied over wide ranges while the model is maintained at a fixed position in the tunnel.

The Langley 4- by 7-Meter Tunnel may be operated with either an open- or closed-throat test section by raising or lowering the side walls and ceiling. For this investigation the tunnel was operated in the open-throat mode with a floor in place. The rectangular jet entrance to the test chamber is 14.5 ft high and 21.75 ft wide. Acoustic treatment was employed to reduce reflections and improve the acoustic characteristics of the test chamber. Some of this treatment can be seen in figure 3 on the test section floor and in figure 3(b) on the test chamber wall.

## TEST PROCEDURES AND CONDITIONS

The two rotor blade configurations had the capability for tip modification. Four tips were selected for the UH-60 and five tips selected for the S-76. (See fig. 5.) Since the purpose of the wind-tunnel investigation was to obtain an acoustic data base, only limited aerodynamic performance data were collected. For each rotor configuration, the original intent was to obtain the basic hover characteristics, run through a detailed acoustic test envelope, and then conduct a limited aerodynamic performance test at low advance ratios for each rotor configuration. For some configurations, the tests were shortened primarily because a tip configuration failed on the rotor blade. The shortened test matrix is reflected in the incomplete run schedule for the aerodynamic and acoustic tests.

The rotor configurations were tested for hover at various levels of rotor rotational speed ranging from 1180 to 1500 rpm. The acoustic data were acquired at two levels of  $C_T/\sigma$  (0.064 and 0.086) for a range of free-stream velocities from 50 to 90 knots, and a range of tip-path-plane angles of attack from  $-10^\circ$  to  $10^\circ$ . The limited aerodynamic data were acquired for a range of advance ratios (0.15 to 0.30) and a range of tip-path-plane angles of attack ( $-6^\circ$  to  $3^\circ$ ). The acoustic data and the aerodynamic data were acquired by different techniques. To obtain the acoustic data the procedure was to select an appropriate  $C_T/\sigma$ , free-stream velocity, and then run through an angle-of-attack sweep at zero flapping in order to bracket the

blade-vortex interaction phenomena as viewed on-line. (See ref. 3.) To obtain the aerodynamic data the procedure was to select an appropriate advance ratio and angle of attack, and then run through a collective ( $C_T/\sigma$ ) sweep at zero flapping in order to develop a performance map at each advance ratio and angle of attack. All these tests were conducted at a constant value of rotor rotational speed, except for a few limited cases where the rotor and free-stream velocity were operated at a slightly reduced value but with matched advance ratio,  $C_T/\sigma$ , and angle of attack.

A summary of the run schedule for the aerodynamic tests for the UH-60 and S-76 rotors is provided as follows:

#### UH-60

Rotor configuration	Run number for $\mu$ of -		
	0	0.15	0.20
Standard tip	84, 85	120-128	129-137
Swept tip with standard airfoil	400-403, 405-408	422-427	428-433
Swept tip with new airfoil	500-504	524-532	533-541
Parabolic tip	700-703	723-731	732-740

#### S-76

Rotor configuration	Run number for $\mu$ of -		
	0	0.215	0.30
Standard tip	80-83	214-222	223-228
Anhedral tip	300-303		
Swept tip	600-603		
Tapered tip	800-803	822-827	
Square tip	901-904	917-920	

A summary of the run schedule for the acoustic tests for the UH-60 and S-76 rotors is provided as follows:

## UH-60

Rotor configuration	Run number for -		
	$C_T/\sigma = 0.064$ ( $V_\infty$ vs $\alpha_{TPP}$ )	$C_T/\sigma = 0.086$ ( $V_\infty$ vs $\alpha_{TPP}$ )	$C_T/\sigma$ variation at $V_\infty^*$
Standard tip	109, 112, 116, 117	100-108, 110, 111, 113-115, 118	119
Swept tapered tip with standard airfoil	416, 418	404, 409-415, 417, 419, 420	421
Swept tapered tip with new airfoil	511, 514, 517	505-510, 512, 513, 515, 516, 518, 519, 521, 522	520, 523
Parabolic tip	712, 713, 715	704-711, 714, 716, 717	718

## S-76

Rotor configuration	Run number for -		
	$C_T/\sigma = 0.074$ ( $V_\infty$ vs $\alpha_{TPP}$ )	$C_T/\sigma = 0.099$ ( $V_\infty$ vs $\alpha_{TPP}$ )	$C_T/\sigma$ variation at $V_\infty^*$
Standard tip	205, 208, 211, 233	200-204, 206, 207 209, 210, 212, 230-232, 234	213
Anhedral tip		304-306	
Swept tip	609	604-608, 610-612	
Tapered tip	809, 811, 813	804-808, 810, 812, 814-817, 819-821	818
Square tip	909, 912, 913	905-908, 910, 911, 914, 915	916

The model hub configuration used is representative of a full-scale hub. The data presented in this report have not been adjusted for force and moment contributions due to aerodynamic forces acting on the model rotor hub. The data for free-stream velocities other than zero have been corrected for jet-boundary effects by using the methods described in reference 5. The corrected tunnel free-stream dynamic pressure and flow direction are used to compute all velocity parameters and angles of attack.



Unfortunately, after the test program, an anomaly was detected in the rotor balance data. After thorough evaluation, the axial-force component was found to be biased by as much as 120 lb ( $0.0125 C_D/\sigma$ ). This bias was caused by an increase in the temperature of the rotor balance located next to the electric drive motors. Even though no temperature measurements were obtained in the vicinity of the rotor balance, the data indicated that as the motor warmed up during a run the heat transferred to the rotor balance and caused the apparent increase in axial force. Usually, all Langley balances are thermally compensated; however, for this test, the balance was a new design for the NASA designers and thus not properly compensated. The problem has since been corrected; however, the anomaly was still present in the rotor drag component data. Only the rotor axial-force measurement was seriously contaminated in these data, and an attempt was made to account for the drift in the axial-force data. Thermal effects typically cause shifts in both zero readings and sensitivities, however, only the zero shift error can be addressed in this data set. The most straight-forward method of data correction would have been to apply a correction based on temperature; however, since temperature at the balance was not measured that was not possible. Correction based on the time of operation was applied instead.

All the rotor axial-force data from the hover runs were collected into one large data base. A second-order polynomial regression analysis was performed on these axial-force data as a function of time from the start of the motors. Because for a pure hover test the rotor axial force should be near zero, depending on the ability of the pilot to maintain zero flapping, this curve should provide a correction equation that can be applied to the rest of the data at free-stream velocities other than zero. This correction was applied to the raw axial-force data, and then the full data base was recomputed. Since the corrections had to be made as a function of time, there still remains some uncertainty in the accuracy of the axial-force data. Upon review of all the hover data after correction it appears that the uncertainty can be as much as  $\pm 25$  lb (approximately  $\pm 0.0025 C_D/\sigma$ ). For this reason, the data are being presented in tabular form and no attempt has been made to compare the performance of the various tip configurations. Since there is no way to assure that the rotor axial-force data at free-stream velocities other than zero have been successfully corrected, it is important that the reader be careful in interpreting any results that depend on the rotor axial-force measurements. The only parameter affected, that is presented herein, is  $C_D/\sigma$ , which is labeled  $C_D^*/\sigma$  in tables II through X.

#### PRESENTATION OF RESULTS

The results of this wind-tunnel investigation are presented herein in tabular form in tables II through X as follows:

	Table
Rotor Configuration:	
UH-60 with standard tip .....	II
UH-60 with swept standard airfoil tip .....	III
UH-60 with swept new airfoil tip .....	IV
UH-60 with parabolic tip .....	V
S-76 with standard tip .....	VI
S-76 with anhedral tip .....	VII
S-76 with swept tip .....	VIII
S-76 with tapered tip .....	IX
S-76 with square tip .....	X

In tables II through X, part (a) includes the parameters computed from the data base which basically describe the rotor control operating conditions, whereas part (b) includes the parameters computed from the data base which describe vehicle and tunnel flight simulation parameters.

NASA Langley Research Center  
Hampton VA 23665-5225  
February 4, 1986

#### REFERENCES

1. Weller, William H.: Experimental Investigation of Effects of Blade Tip Geometry on Loads and Performance for an Articulated Rotor System. NASA TP-1303, AVRADCOM TR 78-53, 1979.
2. Jepson, D.; Moffitt, R.; Hilzinger, K.; and Bissell, J.: Analysis and Correlation of Test Data From an Advanced Technology Rotor System. NASA CR-3714, 1983.
3. Martin, R. M.; Elliott, J. W.; and Hoad, D. R.: Comparison of Experimental and Analytical Predictions of Rotor Blade-Vortex Interactions Using Model Scale Acoustic Data. AIAA-84-2269, Oct. 1984.
4. Wilson, John C.: A General Rotor Model System for Wind-Tunnel Investigations. J. Aircr., vol. 14, no. 7, July 1977, pp. 639-643.
5. Heyson, Harry H.: Use of Superposition in Digital Computers To Obtain Wind-Tunnel Interference Factors for Arbitrary Configurations, With Particular Reference to V/STOL Models. NASA TR R-302, 1969.

TABLE I.- ROTOR DESIGN CHARACTERISTICS

Characteristics	UH-60 rotor	S-76 rotor
Hub type .....	Fully articulated	Fully articulated
Number of blades .....	4	4
Airfoil section .....	See figure 4	See figure 4
Hinge offset, in. ....	3.0	3.0
Root cutout, in. ....	7.3	10.2
Pitch-flap coupling angle, deg .....	-2	-2
Twist .....	See figure 4	See figure 4
Radius, R, in. ....	56.224	56.040
Primary airfoil chord, c, in. ....	3.6	3.1

TABLE II.- UH-60 ROTOR WITH STANDARD TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
84	2	0.20	0.02	-0.65	0.80	-0.63	0.13	0.11
84	3	.24	1.97	-.50	.76	-.34	.16	.17
84	4	.29	3.96	-.40	.69	.06	.16	.04
84	5	.43	5.93	-.43	.76	.57	.24	.05
85	1	.12	.01	-.43	.63	-.65	.05	.07
85	2	.16	1.99	-.43	.63	-.46	.05	.15
85	3	.29	3.95	-.37	.71	-.08	.15	.08
85	4	.29	5.92	-.44	.63	.51	.07	.11
85	5	.46	7.90	-.43	.63	1.10	.15	.16
85	6	.51	9.86	-.35	.57	1.76	.10	.05
100	2	-6.29	8.31	-1.03	2.40	2.46	.02	-.02
100	3	-4.24	7.92	-1.03	2.40	2.17	.05	.08
100	4	-2.19	7.47	-1.32	2.37	3.17	.14	.00
100	5	-.27	7.03	-1.14	2.68	3.34	-.10	.13
100	6	1.78	6.57	-1.24	2.70	2.07	-.07	.13
100	7	3.90	6.24	-1.64	2.54	2.69	.09	-.02
100	8	5.97	5.78	-1.64	2.54	2.05	.00	.03
100	52	8.03	5.43	-1.57	2.49	2.66	-.05	.11
100	53	10.04	5.01	-1.71	2.24	3.09	.03	.07
101	1	5.97	5.36	-1.42	2.41	2.73	-.07	.04
101	2	4.35	5.79	-1.42	2.42	2.07	.03	.03
101	3	1.91	6.26	-1.39	2.55	3.10	.03	-.07
101	4	.01	6.67	-1.17	2.44	2.04	.10	.06
101	5	-2.02	7.18	-1.17	2.44	2.28	.11	-.02
101	6	-4.05	7.64	-1.13	2.49	3.33	.05	-.11
101	51	10.23	4.46	-1.54	1.83	3.23	.13	.11
101	52	8.14	4.87	-1.55	2.10	3.23	.05	.05
102	1	10.25	3.95	-1.30	1.64	3.21	.12	.13
102	2	8.33	4.41	-1.37	1.83	3.22	.16	.03
102	3	6.23	5.00	-1.27	2.12	3.25	.11	.08
102	4	6.19	5.00	-1.27	2.11	3.26	.07	.08
102	5	4.28	5.54	-1.33	2.15	3.20	.19	.04
102	8	4.10	5.57	-1.25	2.35	2.32	.11	-.02
102	9	2.17	6.05	-.88	2.25	2.41	.20	.23
102	10	.27	6.56	-.88	2.25	2.41	.27	.13
102	11	-1.89	7.04	-.86	2.53	2.43	.07	.03
102	12	-4.00	7.54	-.64	2.44	2.42	.09	.13
102	13	-6.10	7.89	-.64	2.44	2.42	.00	.08
103	1	-5.80	7.76	-.47	2.24	2.39	.19	.12
103	2	-3.67	7.29	-.47	2.24	2.38	.24	.21
103	3	-1.76	6.82	-.68	2.39	2.39	.19	.12
103	4	.02	6.24	-.67	2.39	2.35	.05	.19
103	7	2.33	5.71	-.85	2.29	2.33	.18	.21
103	8	4.25	5.16	-.93	2.18	2.33	.13	.20
103	10	8.33	4.01	-1.22	1.75	2.33	.12	.10
103	11	10.61	3.50	-1.25	1.59	2.34	.20	.08

TABLE II.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
104	1	10.50	3.18	-1.11	1.68	2.34	0.06	-0.01
104	2	8.52	3.69	-1.07	1.64	2.34	.19	.07
104	3	6.56	4.26	-.99	1.75	2.37	.21	.13
104	4	4.57	4.83	-.89	1.96	2.33	.21	.14
104	5	2.49	5.45	-.76	2.14	2.31	.23	.18
104	6	.46	6.02	-.66	2.29	2.33	.21	.17
104	7	-1.80	6.61	-.56	2.43	2.38	.20	.18
104	8	-3.55	7.21	-.56	2.43	2.38	.23	.12
104	9	-5.60	7.70	-.56	2.43	2.38	.20	.03
105	1	-5.94	8.06	-.86	2.37	2.44	.12	.16
105	2	6.31	5.17	-1.51	2.11	2.42	.20	.03
106	1	-5.72	6.10	-.83	3.55	1.23	.16	.16
106	2	-3.70	5.60	-.84	3.54	1.25	.14	.11
106	3	-1.66	5.04	-.83	3.54	1.23	.13	.08
106	4	2.35	3.84	-.95	3.38	1.20	.16	.03
106	5	2.36	3.84	-.95	3.38	1.20	.16	.04
106	6	4.40	3.22	-1.23	3.14	1.22	.15	.13
106	7	6.36	2.54	-1.27	2.82	1.21	.11	.11
106	8	8.42	1.97	-1.35	2.66	1.18	.11	.12
107	1	10.55	.83	-1.00	2.39	1.18	.06	.10
107	2	6.50	1.81	-1.10	2.56	1.09	.06	.18
107	3	5.00	2.09	-.98	2.71	1.01	.12	.11
107	4	4.46	2.69	-.86	2.87	1.02	.08	.08
107	5	.39	4.17	-.69	3.41	1.21	.08	.13
107	6	.38	4.17	-.69	3.41	1.18	.08	.14
107	7	-3.60	5.38	-.58	3.57	1.13	.12	.15
107	8	-3.64	5.46	-.42	3.55	1.14	.08	.07
107	9	-5.59	5.93	-.42	3.55	1.07	.13	.11
108	12	-.34	5.13	-1.03	3.32	1.50	-.24	.10
108	13	2.62	4.19	-1.27	2.98	1.51	-.32	.14
108	14	5.64	3.34	-1.26	2.64	1.50	-.36	.08
109	1	5.69	1.31	-1.20	1.91	.84	-.31	.06
109	2	2.68	2.21	-1.28	2.15	.85	-.33	.15
109	3	-.29	2.96	-1.17	2.30	.86	-.32	.10
110	1	-.31	4.41	-.16	3.37	1.39	-.23	.02
110	2	2.68	3.32	-.48	2.86	1.41	-.36	.12
110	3	5.72	2.18	-.62	2.51	1.36	-.32	.13
111	1	5.60	3.01	-1.54	2.40	1.34	-.36	.19
111	2	2.59	3.95	-1.33	2.74	1.37	-.40	.15
111	3	-.45	4.83	-1.01	3.03	1.36	-.36	.08
112	1	-.47	2.73	-1.34	2.02	.69	-.39	.19
112	2	2.60	1.92	-1.18	1.90	.72	-.34	.03
112	3	5.60	1.17	-1.47	1.70	.70	-.37	.17
113	2	-.14	4.36	-.26	3.17	.86	-.26	.03
113	3	3.01	3.18	-.61	2.86	.80	-.21	.14
113	4	5.87	2.24	-.57	2.56	.78	-.23	.08
114	1	5.89	1.91	-.77	2.16	.71	-.23	.08

TABLE II.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
114	2	2.91	2.87	-0.62	2.46	0.71	-0.23	0.06
114	3	-.17	3.99	-.46	2.89	.65	-.23	.05
115	1	-0.42	4.56	-1.14	2.90	0.66	-.31	.13
115	2	2.72	3.85	-1.25	2.87	.72	-.25	.08
115	3	5.76	2.87	-1.45	2.51	.67	-.24	.09
116	2	2.72	2.12	-1.30	2.10	.12	-.24	.02
117	2	-.17	3.05	-.84	2.45	-1.08	-.14	-.06
117	3	5.94	1.25	-1.15	1.89	-.96	-.17	-.05
117	4	5.95	1.25	-1.15	1.89	-1.23	-.15	-.05
117	5	3.01	2.06	-.94	2.27	-1.29	-.07	-.09
118	1	-6.10	6.13	-.03	3.20	-.64	-.18	-.10
118	2	-4.08	5.47	-.16	3.15	.26	-.20	-.08
118	3	-2.08	4.94	-.26	3.22	-.68	-.17	-.04
118	4	-.11	4.27	-.36	3.09	-.38	-.20	-.04
118	5	1.95	3.19	-.56	2.81	-.57	-.15	-.05
118	6	3.93	2.90	-.66	2.67	-.48	-.24	-.05
118	7	5.95	2.38	-.67	2.56	.16	-.24	-.06
118	8	8.02	1.57	-.73	2.48	-.68	-.17	-.06
118	9	10.07	1.24	-.73	2.48	-.37	-.15	-.06
119	1	5.94	1.30	-1.21	2.14	-1.32	-.15	-.05
119	2	5.93	2.32	-1.26	2.50	-.96	-.16	-.03
119	3	5.94	3.21	-1.24	2.76	-.33	-.15	-.03
119	4	5.97	4.27	-1.10	3.15	-.16	-.16	-.07
120	2	-.28	1.10	-.48	1.62	-1.87	-.30	-.14
120	3	-.31	2.00	-.61	1.97	-1.33	-.28	-.12
120	4	-.28	2.98	-.53	2.40	-1.25	-.24	-.15
120	5	-.35	3.97	-.57	2.75	-.98	-.31	-.13
120	6	-.30	4.96	-.59	3.23	-.70	-.25	-.11
120	7	-.31	5.95	-.58	3.63	-.28	-.25	-.09
121	1	-3.36	1.74	-.44	1.58	-1.50	-.34	-.11
121	2	-3.30	2.99	-.47	2.18	-1.19	-.24	-.12
121	3	-3.32	3.97	-.39	2.57	-1.13	-.24	-.14
121	4	-3.36	4.96	-.46	2.89	-.85	-.28	-.12
121	5	-3.41	5.93	-.57	3.29	-.69	-.30	-.05
121	6	-3.38	6.93	-.41	3.77	-.44	-.25	-.13
121	7	-3.42	7.90	-.34	4.10	-.14	-.31	-.15
121	8	-3.45	8.89	-.42	4.48	.43	-.34	-.16
121	9	-3.40	9.85	-.55	5.14	.29	-.26	-.14
122	1	-6.33	2.38	-.24	1.61	-1.32	-.31	-.15
122	2	-6.37	2.97	-.26	1.82	-1.52	-.31	-.16
122	3	-6.39	3.97	-.30	2.14	-1.57	-.32	-.12
122	4	-6.37	4.96	-.37	2.58	-.97	-.27	-.11
122	5	-6.38	5.94	-.36	2.96	-.94	-.26	-.12
122	6	-6.40	6.91	-.35	3.37	-.25	-.26	-.13
122	7	-6.45	7.91	-.44	3.61	.30	-.32	-.08
122	8	-6.43	8.89	-.37	4.04	-.05	-.29	-.11
122	9	-6.45	9.89	-.38	4.50	.22	-.28	-.11

TABLE II.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
122	10	-6.46	10.88	-0.37	5.07	0.41	-0.27	-0.09
122	11	-6.54	11.42	-.20	5.53	.51	-.34	-.13
123	1	-6.29	2.61	-0.41	1.49	-2.01	0.27	-.16
123	2	-6.34	3.98	-.46	1.98	-1.28	-.31	-.14
123	3	-6.34	4.97	-.49	2.39	-1.28	-.29	-.12
123	4	-6.33	5.95	-.39	2.75	-.67	-.30	-.15
123	5	-6.40	6.94	-.31	3.15	-.56	-.36	-.15
123	6	-6.33	7.93	-.40	3.53	-.26	-.27	-.09
123	7	-6.33	8.91	-.30	4.01	.01	-.28	-.12
123	8	-6.36	9.45	-.22	4.28	.17	-.33	-.12
124	2	-3.40	2.99	-.61	1.90	-1.77	-.30	-.17
124	3	-3.40	3.98	-.66	2.30	-1.38	-.29	-.11
124	4	-3.37	4.96	-.57	2.81	-1.02	-.22	-.14
124	5	-3.40	5.94	-.56	3.20	-.74	-.27	-.10
124	6	-3.40	6.94	-.48	3.56	-.38	-.28	-.12
124	7	-3.41	7.94	-.38	3.99	.05	-.30	-.14
124	8	-3.39	8.54	-.40	4.26	.19	-.32	-.15
125	1	-.26	1.16	-.72	1.49	-2.11	-.26	-.14
125	2	-.31	2.01	-.79	1.79	-1.78	-.30	-.12
125	3	-.32	2.99	-.79	2.21	-1.51	-.30	-.10
125	4	-.28	3.97	-.73	2.67	-1.20	-.27	-.12
125	5	-.32	4.97	-.64	3.07	-.87	-.30	-.14
125	6	-.35	5.96	-.66	3.48	-.51	-.34	-.08
126	1	-.25	1.19	-.90	1.31	-2.01	-.30	-.10
126	2	-.23	2.00	-.87	1.70	-1.76	-.27	-.12
126	3	-.28	3.01	-.82	2.08	-1.43	-.30	-.12
126	4	-.25	3.98	-.74	2.54	-1.12	-.28	-.14
126	5	-.26	4.99	-.62	3.07	-.41	-.30	-.11
126	6	-.25	5.96	-.56	3.45	-.31	-.29	-.12
126	7	-.21	6.93	-.48	3.87	.00	-.31	-.13
126	8	-.14	7.50	-.57	4.31	.11	-.21	-.10
127	1	-3.26	1.78	-.71	1.32	-2.00	-.31	-.12
127	2	-3.29	2.99	-.73	1.78	-1.51	-.32	-.13
127	3	-3.26	3.98	-.70	2.23	-1.23	-.29	-.12
127	4	-3.26	4.96	-.63	2.66	-.93	-.31	-.07
127	5	-3.29	5.94	-.55	3.11	-.62	-.32	-.09
127	6	-3.26	6.92	-.38	3.55	-.35	-.30	-.14
127	7	-3.23	7.92	-.40	4.00	.00	-.29	-.13
127	8	-3.30	8.42	-.42	4.24	-.02	-.36	-.10
128	1	-6.22	2.48	-.59	1.31	-2.17	-.29	-.10
128	2	-6.25	3.99	-.54	1.94	-1.60	-.29	-.11
128	3	-6.25	4.97	-.59	2.33	-1.26	-.27	-.08
128	4	-6.25	5.93	-.41	2.72	-.95	-.28	-.13
128	5	-6.32	6.93	-.41	3.14	-.53	-.31	-.09
128	6	-6.27	7.92	-.36	3.47	-.19	-.27	-.11
128	7	-6.25	8.88	-.34	3.95	.05	-.27	-.08
129	2	-.16	.91	-.05	1.55	-.54	-.28	-.16



TABLE II.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
129	3	-0.24	2.00	-0.09	1.95	-0.14	-0.38	-0.11
129	4	-.19	2.97	.01	2.48	.30	-.30	-.14
129	5	-.17	3.96	.08	2.95	.59	-.31	-.12
129	6	-.15	4.95	.14	3.48	.96	-.29	-.13
129	7	-.19	5.93	.18	4.01	1.25	-.34	-.08
129	8	-.15	6.93	.31	4.67	1.47	-.30	-.12
129	9	-.12	7.86	.35	5.33	1.69	-.26	-.16
130	1	-3.23	1.85	.12	1.69	-.52	-.32	-.14
130	2	-3.22	3.97	.14	2.66	.15	-.32	-.10
130	3	-3.19	5.95	.34	3.68	.87	-.29	-.16
130	4	-3.21	7.90	.48	4.77	1.45	-.32	-.14
130	5	-3.21	9.31	.48	5.81	1.76	-.31	-.11
131	2	-6.18	4.96	.25	2.77	-.20	-.30	-.08
131	3	-6.19	6.94	.40	3.74	1.06	-.30	-.10
131	4	-6.16	8.89	.55	4.78	1.61	-.29	-.14
131	5	-6.18	9.89	.67	5.49	1.66	-.31	-.15
132	1	-6.16	2.85	-.04	1.46	-.90	-.32	-.07
132	2	-6.16	4.94	.17	2.47	-.44	-.35	-.11
132	3	-6.12	6.93	.45	3.58	.96	-.29	-.15
132	4	-6.10	8.89	.68	4.74	1.33	-.35	-.13
133	1	-3.21	1.86	-.29	1.41	-.50	-.30	-.06
133	2	-3.21	3.97	-.03	2.41	-.17	-.33	-.12
133	3	-3.17	5.94	.30	3.48	.30	-.30	-.11
133	4	-3.12	7.90	.49	4.71	.88	-.27	-.11
134	1	-.15	.80	-.36	1.15	-1.14	-.30	-.14
134	2	-.11	2.98	-.21	2.26	-.28	-.30	-.13
134	3	-.11	4.95	.10	3.28	.82	-.34	-.14
134	4	-.06	6.93	.31	4.52	.77	-.31	-.08
134	5	-.08	8.40	.55	5.57	1.05	-.34	-.12
135	1	-.11	.84	-.53	1.10	-1.35	-.30	-.09
135	2	-.13	2.98	-.35	2.09	-.66	-.33	-.09
135	3	-.04	4.96	.08	3.28	.37	-.29	-.12
136	1	-3.17	1.96	-.29	1.29	-1.02	-.27	-.12
136	2	-3.12	3.96	-.16	2.33	-.83	-.28	-.11
136	3	-3.09	5.94	.34	3.45	.04	-.27	-.12
136	4	-3.07	6.96	.50	4.03	.36	-.30	-.11
137	1	-6.17	2.86	-.11	1.28	-1.06	-.37	-.11
137	2	-6.08	4.94	.06	2.42	-.29	-.30	-.08
137	3	-6.06	6.92	.43	3.51	.36	-.27	-.13
137	4	-6.07	8.10	.64	4.09	1.28	-.35	-.11

TABLE II.- Continued

## (b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
84	2	0.000	0.585	0.000	0.1168	0.0091	-0.0002	0.0015
84	3	.000	.586	.000	.3187	.0212	-.0004	.0019
84	4	.000	.586	.000	.5225	.0374	-.0006	.0028
84	5	.000	.586	.000	.6636	.0575	-.0006	.0042
85	1	.000	.635	.000	.1278	.0096	-.0004	.0015
85	2	.000	.635	.000	.3188	.0210	-.0004	.0019
85	3	.000	.634	.000	.5231	.0371	-.0006	.0028
85	4	.000	.636	.000	.6544	.0568	-.0004	.0042
85	5	.000	.635	.000	.7096	.0795	-.0004	.0064
85	6	.000	.634	.000	.7083	.1031	.0000	.0094
100	2	.115	.703	49.755	.9497	.0868	-.0058	.0054
100	3	.115	.705	49.746	1.0090	.0869	-.0026	.0051
100	4	.115	.706	49.737	1.0965	.0863	.0002	.0047
100	5	.115	.707	49.746	1.1798	.0858	.0020	.0043
100	6	.117	.707	50.367	1.3140	.0860	.0040	.0039
100	7	.117	.706	50.359	1.4534	.0865	.0068	.0035
100	8	.116	.704	50.051	1.5890	.0848	.0102	.0032
100	52	.116	.699	50.135	1.8151	.0838	.0133	.0027
100	53	.117	.696	50.435	2.0978	.0848	.0157	.0024
101	1	.128	.711	55.105	1.8179	.0853	.0108	.0028
101	3	.128	.715	55.394	1.4306	.0862	.0050	.0036
101	4	.128	.715	55.399	1.2705	.0859	.0023	.0040
101	5	.128	.713	55.145	1.1499	.0863	-.0006	.0044
101	6	.128	.711	55.152	1.0552	.0870	-.0037	.0049
101	51	.127	.702	54.905	2.6378	.0850	.0164	.0019
101	52	.128	.706	55.209	2.2227	.0847	.0130	.0023
102	1	.139	.709	60.115	3.3869	.0847	.0165	.0015
102	2	.139	.713	60.129	2.7345	.0848	.0133	.0019
102	3	.140	.715	60.142	2.1946	.0857	.0100	.0023
102	4	.139	.716	60.144	2.1707	.0855	.0099	.0023
102	5	.140	.716	60.147	1.8665	.0860	.0069	.0027
102	8	.140	.715	60.236	1.7968	.0851	.0083	.0028
102	9	.140	.717	60.223	1.5855	.0869	.0044	.0033
102	10	.140	.717	60.241	1.3720	.0867	.0007	.0038
102	11	.141	.718	60.518	1.2245	.0865	-.0032	.0042
102	12	.140	.715	60.264	1.0992	.0867	-.0059	.0047
102	13	.141	.714	60.525	1.0141	.0860	-.0088	.0051
102	14	.151	.720	64.812	1.0271	.0852	-.0080	.0049
103	1	.152	.721	65.528	1.0341	.0857	-.0080	.0049
103	2	.152	.724	65.284	1.1433	.0860	-.0048	.0045
103	3	.152	.725	65.527	1.2995	.0866	-.0021	.0040
103	4	.152	.725	65.515	1.4499	.0858	.0004	.0035
103	7	.152	.724	65.269	1.7117	.0850	.0072	.0029
103	8	.151	.723	65.004	1.9876	.0848	.0104	.0025
103	10	.151	.718	64.990	3.2627	.0843	.0165	.0016
103	11	.151	.713	64.986	4.3271	.0832	.0191	.0012

TABLE II.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
104	1	0.163	0.720	70.109	5.8079	0.0841	0.0184	0.0009
104	2	.163	.725	70.321	4.0477	.0851	.0140	.0013
104	3	.163	.728	70.310	2.9906	.0859	.0097	.0017
104	4	.163	.730	70.094	2.2899	.0856	.0065	.0022
104	5	.162	.731	69.880	1.8283	.0851	.0034	.0027
104	6	.163	.733	70.324	1.5358	.0851	.0005	.0033
104	7	.163	.733	70.325	1.3093	.0856	-.0025	.0039
104	8	.163	.731	70.097	1.1674	.0858	-.0051	.0044
104	9	.163	.730	70.314	1.0497	.0857	-.0080	.0049
105	1	.129	.708	55.273	.9705	.0857	-.0089	.0053
105	2	.128	.708	55.227	1.8907	.0863	.0095	.0027
106	1	.162	.727	69.802	1.0339	.0861	-.0087	.0050
106	2	.163	.729	70.264	1.1506	.0867	-.0066	.0045
106	3	.162	.729	69.809	1.2885	.0860	-.0040	.0040
106	4	.163	.729	70.033	1.7012	.0855	.0021	.0030
106	5	.163	.729	70.032	1.7233	.0859	.0022	.0030
106	6	.162	.727	69.801	2.1942	.0862	.0058	.0023
106	7	.162	.725	69.793	2.7864	.0860	.0092	.0018
106	8	.162	.722	69.563	3.6587	.0855	.0125	.0014
107	1	.186	.732	80.035	14.5036	.0843	.0164	.0004
107	2	.187	.740	80.655	3.7741	.0819	.0097	.0013
107	3	.188	.741	80.681	2.9265	.0794	.0070	.0016
107	4	.187	.742	80.643	2.6689	.0857	.0068	.0019
107	5	.185	.743	79.850	1.6156	.0862	.0004	.0032
107	6	.186	.744	80.050	1.6190	.0863	.0005	.0032
107	7	.186	.742	80.061	1.1779	.0852	-.0054	.0043
107	8	.185	.742	79.853	1.1703	.0860	-.0053	.0044
107	9	.186	.740	80.062	1.0388	.0845	-.0081	.0048
108	12	.149	.617	54.972	1.4026	.0874	.0025	.0037
108	13	.150	.617	55.269	1.7660	.0865	.0078	.0029
108	14	.149	.614	54.972	2.3238	.0861	.0129	.0022
109	1	.149	.614	54.837	2.3160	.0631	.0104	.0014
109	2	.150	.617	55.126	1.7466	.0647	.0067	.0019
109	3	.150	.618	55.428	1.3488	.0644	.0027	.0024
110	1	.200	.644	73.671	1.6105	.0854	.0015	.0031
110	2	.202	.644	74.331	2.4530	.0869	.0052	.0021
110	3	.201	.640	74.146	4.0407	.0849	.0102	.0012
111	1	.149	.669	59.969	2.3853	.0854	.0104	.0021
111	2	.149	.671	59.967	1.8049	.0873	.0062	.0029
111	3	.150	.673	60.249	1.3988	.0869	.0018	.0037
112	1	.150	.673	60.158	1.2903	.0622	.0024	.0024
112	2	.149	.672	59.894	1.5516	.0611	.0056	.0020
112	3	.149	.669	60.166	2.1792	.0616	.0093	.0014
113	2	.199	.696	79.987	1.7067	.0870	.0030	.0030
113	3	.199	.696	80.211	2.5195	.0861	.0078	.0020
113	4	.199	.693	80.222	4.2239	.0864	.0122	.0012
114	1	.200	.751	87.191	4.3442	.0852	.0120	.0012

TABLE II.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
114	2	0.201	0.753	87.374	2.5325	0.0859	0.0069	0.0020
114	3	.200	.755	87.200	1.7129	.0857	.0014	.0030
115	1	.150	.724	65.212	1.4219	.0858	-.0010	.0036
115	2	.148	.723	64.690	1.7712	.0875	.0022	.0029
115	3	.150	.721	65.433	2.4228	.0866	.0072	.0021
116	1	.149	.721	65.118	2.2653	.0633	.0052	.0014
116	2	.151	.724	65.619	1.6460	.0640	.0017	.0020
117	2	.150	.724	65.277	1.2818	.0643	.0021	.0026
117	3	.149	.719	64.766	2.1851	.0629	.0097	.0015
117	4	.149	.719	65.021	2.1461	.0623	.0096	.0015
117	5	.150	.723	65.514	1.6186	.0629	.0061	.0020
118	1	.175	.727	75.559	1.0310	.0868	-.0057	.0050
118	2	.175	.729	75.342	1.1506	.0860	-.0030	.0044
118	3	.175	.731	75.325	1.2914	.0860	-.0007	.0039
118	4	.175	.732	75.544	1.4968	.0857	.0011	.0034
118	5	.174	.731	75.122	1.7794	.0809	.0027	.0026
118	6	.174	.730	75.091	2.2356	.0857	.0061	.0023
118	7	.174	.726	74.860	2.8893	.0871	.0094	.0018
118	8	.174	.724	74.879	3.7969	.0827	.0118	.0013
118	9	.174	.720	75.078	5.8320	.0854	.0154	.0009
119	1	.140	.707	60.314	1.7560	.0610	.0060	.0017
119	2	.139	.707	59.931	1.9781	.0752	.0076	.0021
119	3	.137	.705	59.029	1.9459	.0859	.0089	.0026
119	4	.139	.707	59.750	1.8481	.0985	.0105	.0034
120	2	.151	.628	56.823	.8641	.0393	.0021	.0018
120	3	.150	.626	56.188	1.1080	.0507	.0022	.0021
120	4	.150	.626	56.118	1.2381	.0622	.0022	.0025
120	5	.149	.626	55.756	1.3353	.0738	.0023	.0030
120	6	.148	.626	55.687	1.3466	.0849	.0021	.0037
120	7	.150	.627	56.200	1.3213	.0956	.0021	.0045
121	1	.152	.628	57.089	.7360	.0397	-.0001	.0022
121	2	.150	.626	56.442	.9286	.0534	-.0012	.0027
121	3	.150	.626	56.366	1.0470	.0653	-.0021	.0032
121	4	.149	.626	56.015	1.0936	.0761	-.0028	.0039
121	5	.149	.625	55.958	1.1213	.0872	-.0037	.0046
121	6	.149	.626	55.887	1.1158	.0981	-.0047	.0056
121	7	.150	.626	56.402	1.0843	.1081	-.0055	.0066
121	8	.149	.626	56.069	1.0316	.1169	-.0065	.0078
121	9	.150	.627	56.317	.9651	.1240	-.0079	.0092
122	1	.150	.623	56.234	.6172	.0383	-.0065	.0025
122	2	.150	.624	56.197	.7186	.0454	-.0079	.0028
122	3	.150	.623	56.125	.8344	.0564	-.0095	.0033
122	4	.149	.624	56.061	.9097	.0673	-.0113	.0039
122	5	.150	.624	56.281	.9658	.0791	-.0129	.0047
122	6	.149	.624	55.922	.9901	.0906	-.0141	.0057
122	7	.149	.623	55.860	.9918	.1016	-.0150	.0067
122	8	.149	.623	55.808	.9655	.1111	-.0161	.0079

TABLE II.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
122	9	0.147	0.622	55.179	0.9121	0.1191	-0.0173	0.0092
122	10	.148	.623	55.437	.8466	.1253	-.0183	.0107
122	11	.151	.624	56.575	.8058	.1278	-.0187	.0116
123	1	.148	.695	62.158	.6445	.0395	-.0070	.0025
123	2	.149	.696	62.311	.8502	.0570	-.0086	.0033
123	3	.148	.696	61.967	.9364	.0692	-.0098	.0040
123	4	.149	.697	62.663	.9906	.0822	-.0109	.0049
123	5	.148	.695	62.068	1.0069	.0950	-.0122	.0059
123	6	.149	.695	62.261	.9736	.1050	-.0132	.0071
123	7	.148	.695	61.945	.9175	.1140	-.0143	.0086
123	8	.149	.695	62.443	.8804	.1176	-.0147	.0094
124	1	.148	.698	62.145	.7310	.0401	-.0046	.0022
124	2	.148	.697	62.054	.9385	.0537	-.0052	.0027
124	3	.148	.699	62.233	1.0509	.0662	-.0056	.0033
124	4	.148	.698	62.151	1.1212	.0786	-.0064	.0040
124	5	.147	.698	61.806	1.1508	.0908	-.0069	.0048
124	6	.149	.699	62.515	1.1090	.1019	-.0074	.0059
124	7	.149	.699	62.455	1.0503	.1118	-.0078	.0072
124	8	.148	.698	62.163	.9997	.1167	-.0081	.0081
125	1	.149	.701	62.647	.8946	.0404	-.0021	.0018
125	2	.149	.699	62.317	1.1199	.0521	-.0020	.0021
125	3	.148	.699	61.974	1.2792	.0641	-.0019	.0026
125	4	.149	.700	62.412	1.3552	.0766	-.0018	.0032
125	5	.147	.699	61.812	1.3488	.0883	-.0017	.0039
125	6	.147	.699	61.732	1.3370	.0999	-.0016	.0048
126	1	.151	.729	65.892	.9029	.0410	-.0013	.0019
126	2	.150	.728	65.573	1.1116	.0514	-.0012	.0021
126	3	.150	.728	65.482	1.2828	.0646	-.0011	.0026
126	4	.149	.727	64.894	1.3607	.0774	-.0011	.0032
126	5	.149	.728	65.054	1.3742	.0906	-.0010	.0040
126	6	.149	.728	64.982	1.3055	.1013	-.0010	.0050
126	7	.151	.729	65.653	1.2231	.1117	-.0008	.0062
126	8	.149	.727	65.128	1.1495	.1160	-.0011	.0069
127	1	.150	.727	65.403	.7496	.0394	-.0030	.0021
127	2	.149	.727	65.048	.9769	.0546	-.0036	.0026
127	3	.150	.727	65.211	1.0983	.0674	-.0041	.0032
127	4	.149	.727	65.131	1.1514	.0799	-.0046	.0040
127	5	.148	.726	64.547	1.1405	.0922	-.0052	.0050
127	6	.149	.727	64.966	1.1081	.1036	-.0059	.0061
127	7	.149	.727	65.155	1.0292	.1129	-.0063	.0075
127	8	.149	.727	64.888	.9868	.1169	-.0064	.0082
128	1	.151	.725	65.651	.6495	.0387	-.0046	.0024
128	2	.150	.725	65.277	.8708	.0579	-.0065	.0033
128	3	.149	.724	64.942	.9612	.0706	-.0076	.0040
128	4	.149	.724	65.106	.9928	.0830	-.0088	.0049
128	5	.148	.724	64.770	.9941	.0960	-.0101	.0061
128	6	.148	.723	64.451	.9586	.1067	-.0110	.0074

TABLE II.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
128	7	0.146	0.723	63.639	0.8891	0.1141	-0.0121	0.0088
129	2	.200	.654	75.092	.9434	.0399	.0022	.0017
129	3	.200	.655	75.019	1.3512	.0551	.0019	.0019
129	4	.199	.653	74.743	1.5486	.0679	.0013	.0023
129	5	.199	.654	74.694	1.6264	.0801	.0009	.0028
129	6	.200	.654	75.073	1.6393	.0917	.0003	.0034
129	7	.199	.653	74.808	1.6050	.1023	-.0002	.0041
129	8	.200	.655	75.195	1.4645	.1107	-.0009	.0051
129	9	.200	.654	75.169	1.3536	.1188	-.0018	.0061
130	1	.201	.655	75.512	.7847	.0404	-.0042	.0021
130	2	.200	.653	74.970	1.1384	.0663	-.0054	.0030
130	3	.199	.653	74.858	1.2491	.0909	-.0067	.0044
130	4	.200	.653	75.208	1.1763	.1103	-.0080	.0063
130	5	.200	.654	75.160	1.0585	.1209	-.0092	.0081
131	1	.200	.651	75.292	.6691	.0400	-.0064	.0025
131	2	.200	.652	75.174	.9353	.0663	-.0090	.0037
131	3	.200	.652	75.279	1.0601	.0919	-.0116	.0054
131	4	.200	.652	75.193	1.0165	.1117	-.0138	.0075
131	5	.199	.651	74.949	.9377	.1185	-.0149	.0089
132	1	.200	.727	83.821	.6557	.0398	-.0052	.0025
132	2	.200	.725	83.690	.9662	.0681	-.0078	.0037
132	3	.199	.726	83.364	1.0672	.0959	-.0107	.0057
132	4	.199	.726	83.272	.9629	.1140	-.0126	.0081
133	1	.200	.730	84.023	.7998	.0404	-.0032	.0021
133	2	.200	.729	83.695	1.2085	.0688	-.0044	.0030
133	3	.198	.728	82.981	1.2781	.0947	-.0057	.0046
133	4	.197	.728	82.879	1.1404	.1145	-.0071	.0069
134	1	.200	.730	84.042	.9255	.0385	-.0011	.0016
134	2	.199	.730	83.500	1.6247	.0700	-.0009	.0023
134	3	.198	.729	83.178	1.7066	.0966	-.0007	.0036
134	4	.197	.728	82.687	1.4145	.1152	-.0011	.0056
134	5	.196	.727	82.239	1.2033	.1259	-.0017	.0075
135	1	.201	.759	87.624	.9633	.0391	-.0006	.0016
135	2	.200	.759	87.274	1.7049	.0721	-.0001	.0023
135	3	.199	.758	86.956	1.6891	.0984	-.0002	.0037
136	1	.200	.758	87.426	.7810	.0395	-.0025	.0020
136	2	.200	.757	87.096	1.1844	.0674	-.0038	.0030
136	3	.199	.757	86.583	1.2691	.0957	-.0052	.0047
136	4	.198	.756	86.155	1.1988	.1071	-.0058	.0059
137	1	.201	.755	87.433	.6951	.0412	-.0046	.0024
137	2	.200	.754	87.107	.9862	.0684	-.0072	.0037
137	3	.199	.754	86.961	1.0584	.0969	-.0100	.0058
137	4	.199	.753	86.525	1.0077	.1098	-.0110	.0073

TABLE III.- UH-60 ROTOR WITH SWEPT-STANDARD AIRFOIL TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{Tpp}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
400	2	-0.34	0.03	0.00	-0.01	-0.80	-0.34	-0.02
400	3	-.28	1.03	.00	-.01	-.64	-.31	-.03
400	4	-.25	2.02	.00	-.01	-.62	-.28	-.09
400	5	-.19	2.98	.00	-.01	-.39	-.25	-.12
400	6	-.23	3.97	.00	-.01	-.18	-.30	-.17
400	7	-.19	4.97	.00	-.01	-.04	-.29	-.17
400	8	-.18	5.96	.00	-.01	.22	-.30	-.13
400	9	-.11	6.94	.00	-.01	.51	-.24	-.15
400	10	-.13	7.92	.00	-.01	.70	-.31	-.06
400	11	-.08	8.89	.00	-.01	.83	-.28	-.11
400	12	.00	9.88	.00	-.01	1.13	-.24	-.13
400	13	-.04	10.86	.00	-.01	1.34	-.30	-.13
400	14	.11	11.85	.00	-.01	1.64	-.18	-.03
401	1	-.26	.02	.00	-.01	-.90	-.30	-.07
401	2	-.25	1.01	.00	-.01	-.85	-.30	-.07
401	3	-.19	1.98	.00	-.01	-.84	-.26	-.12
401	4	-.19	3.00	.00	-.01	-.67	-.30	-.11
401	5	-.14	3.99	.00	-.01	-.31	-.26	-.14
401	6	-.15	4.95	.00	-.01	-.13	-.28	-.08
401	7	-.10	5.93	.00	-.01	.15	-.27	-.18
401	8	-.08	6.92	.00	-.01	.41	-.29	-.11
401	9	-.07	7.90	.00	-.01	.42	-.30	-.14
401	10	-.01	8.89	.00	-.01	.73	-.27	-.11
401	11	.06	9.89	.00	-.01	1.03	-.25	-.11
401	12	.02	10.88	.00	-.01	1.24	-.32	-.08
402	1	-.23	.02	.00	-.01	-1.16	-.27	-.07
402	2	-.23	1.04	.00	-.01	-1.19	-.28	-.09
402	3	-.20	2.00	.00	-.01	-.79	-.27	-.11
402	4	-.18	2.98	.00	-.01	-.49	-.27	-.10
402	5	-.14	3.96	.00	-.01	-.67	-.27	-.12
402	6	-.08	4.95	.00	-.01	-.52	-.23	-.14
402	7	-.09	5.99	.00	-.01	-.41	-.26	-.14
402	8	-.09	6.94	.00	-.01	.09	-.30	-.11
402	9	-.01	7.95	.00	-.01	.27	-.25	-.10
402	10	.04	8.89	.00	-.01	.58	-.22	-.11
402	11	.11	9.87	.00	-.01	.84	-.20	-.06
402	12	.14	10.89	.00	-.01	.87	-.21	.05
403	1	-.21	.02	.00	-.01	-1.00	-.25	-.05
403	2	-.29	1.02	.00	-.01	-.68	-.36	-.07
403	3	-.18	2.00	.00	-.01	-.50	-.26	-.08
403	4	-.14	3.01	.00	-.01	-.45	-.25	-.09
403	5	-.13	3.99	.00	-.01	-.18	-.27	-.13
403	6	-.14	4.96	.00	-.01	-.19	-.30	-.13
403	7	-.05	5.95	.00	-.01	.15	-.24	-.15
403	8	-.05	6.96	.00	-.01	.21	-.27	-.11
403	9	-.06	7.92	.00	-.01	.73	-.32	-.14
403	10	.01	8.90	.00	-.01	.87	-.27	-.06

TABLE III.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
403	11	0.04	9.88	0.00	-0.01	0.87	-0.28	-0.09
403	12	.14	10.86	.00	-.01	1.39	-.23	-.05
404	1	-6.33	7.60	-1.33	3.68	.99	.00	.17
404	2	-4.41	7.19	-1.40	3.63	.55	-.11	.14
404	3	-2.26	6.85	-1.28	3.92	.37	.03	-.02
405	9	-.10	.05	.00	-.01	-.71	-.14	.28
405	10	-.21	1.04	.00	-.01	-.57	-.25	.11
405	11	-.17	2.01	.00	-.01	-.43	-.24	.03
405	12	-.18	3.00	.00	-.01	-.25	-.28	-.06
405	13	-.17	3.96	.00	-.01	-.10	-.28	-.23
405	14	-.12	4.95	.00	-.01	.10	-.25	-.35
405	15	-.09	5.94	.00	-.01	.33	-.26	-.43
405	16	-.13	6.94	.00	-.01	.62	-.31	-.61
405	17	-.13	7.90	.00	-.01	.83	-.35	-.64
405	18	-.09	8.90	.00	-.01	1.10	-.34	-.83
405	19	.02	9.88	.00	-.01	1.38	-.24	-.87
405	20	.04	10.85	.00	-.01	1.62	-.27	-.86
406	1	-.20	.03	.00	-.01	-.87	-.24	.23
406	2	-.17	1.05	.00	-.01	-.72	-.24	.12
406	3	-.17	2.01	.00	-.01	-.58	-.27	.04
406	4	-.12	3.02	.00	-.01	-.42	-.24	.00
406	5	-.19	4.01	.00	-.01	-.20	-.34	-.18
406	6	-.16	4.98	.00	-.01	.00	-.33	-.33
406	7	-.10	5.94	.00	-.01	.20	-.31	-.37
406	8	-.08	6.95	.00	-.01	.45	-.32	-.48
406	9	.01	7.91	.00	-.01	.72	-.25	-.40
406	10	.05	8.91	.00	-.01	1.01	-.26	-.50
406	11	.12	9.89	.00	-.01	1.28	-.24	-.31
407	1	-.19	.02	.00	-.01	-.88	-.26	.26
407	2	-.19	1.05	.00	-.01	-.73	-.27	.17
407	3	-.14	1.99	.00	-.01	-.58	-.24	.05
407	4	-.13	2.98	.00	-.01	-.42	-.27	.00
407	5	-.09	3.98	.00	-.01	-.21	-.24	-.15
407	6	-.10	4.96	.00	-.01	.00	-.28	-.28
407	7	-.03	5.95	.00	-.01	.19	-.24	-.39
407	8	-.04	6.94	.00	-.01	.43	-.30	-.52
407	9	.01	7.91	.00	-.01	.69	-.28	-.53
407	10	.08	8.90	.00	-.01	.97	-.24	-.75
407	11	.12	9.90	.00	-.01	1.28	-.26	-.82
407	12	.19	10.84	.00	-.01	1.52	-.21	-.66
408	1	-.18	.03	.00	-.01	-.89	-.25	.28
408	2	-.17	1.04	.00	-.01	-.74	-.26	.17
408	3	-.15	2.02	.00	-.01	-.91	-.26	.08
408	4	-.12	3.03	.00	-.01	-.75	-.25	-.03
408	5	-.18	4.01	.00	-.01	-.57	-.34	-.17
408	6	-.09	4.99	.00	-.01	-.35	-.28	-.26
408	7	-.05	5.95	.00	-.01	-.14	-.27	-.41



TABLE III.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
408	8	0.00	6.92	0.00	-0.01	0.10	-0.27	-0.51
408	9	.01	7.93	.00	-.01	.35	-.29	-.60
408	10	.10	8.93	.00	-.01	.64	-.24	-.77
408	11	.06	9.92	.00	-.01	.91	-.31	-1.01
409	3	-6.10	6.44	-1.06	.74	.42	-.31	.12
409	4	-4.15	5.92	-1.19	.88	.39	-.34	.09
409	5	1.95	4.58	-1.71	1.12	.38	-.23	.11
409	6	4.03	4.24	-1.82	.96	.38	-.27	.14
410	2	-4.52	6.66	-1.47	3.11	.85	-.38	.11
410	3	5.52	4.61	-2.17	2.98	.75	-.52	.14
410	4	7.43	4.20	-2.25	2.75	.74	-.62	.14
410	5	9.76	3.54	-2.11	2.75	.81	-.40	.09
411	1	9.81	2.29	-1.68	2.19	.77	-.46	.07
411	2	7.62	2.82	-1.64	2.24	.76	-.60	.10
411	3	5.70	3.36	-1.64	2.69	.76	-.41	.11
411	4	3.69	3.89	-1.52	2.85	.72	-.47	.12
411	5	1.65	4.34	-1.44	2.99	.71	-.43	.12
411	6	-.29	5.04	-1.28	3.19	.75	-.36	.07
411	7	-4.42	6.03	-1.05	3.08	.70	-.44	.07
412	3	-4.20	5.97	-.37	3.77	.73	-.31	.03
412	4	-2.21	5.31	-.41	3.67	.80	-.31	.10
413	2	-.21	4.56	-1.15	3.20	1.05	-.40	.15
413	3	1.82	3.74	-1.27	2.98	1.04	-.41	.19
413	4	3.92	3.24	-1.24	3.00	1.06	-.29	.16
413	5	5.87	2.56	-1.38	2.66	1.05	-.39	.20
413	6	7.83	1.91	-1.52	2.25	1.06	-.51	.18
414	2	-6.16	6.40	-.40	3.60	.67	-.32	.13
414	3	-4.21	5.65	-.64	3.38	.65	-.47	.16
414	4	-2.07	4.94	-.59	3.50	.64	-.30	.09
414	5	-.26	4.15	-.78	3.11	.60	-.43	.12
414	6	1.96	3.41	-.83	3.10	.60	-.27	.12
414	7	3.79	2.69	-.96	2.66	.61	-.48	.14
414	8	6.09	2.01	-.88	2.71	.59	-.25	.11
414	9	8.24	1.45	-.89	2.71	.61	-.13	.08
415	1	6.01	1.95	-.70	2.82	.61	-.29	.15
415	2	2.84	2.96	-.49	2.95	.54	-.36	.03
415	3	-.18	4.11	-.61	3.26	.52	-.43	.17
416	1	-.39	2.60	-1.41	2.31	-.12	-.47	.14
416	2	2.64	1.75	-1.52	2.10	-.11	-.49	.16
416	3	5.69	.89	-1.41	1.90	-.13	-.43	.06
417	1	5.71	2.94	-1.52	2.67	.50	-.43	.18
418	2	-.21	2.72	-1.31	2.42	-.39	-.33	.11
418	3	2.88	1.81	-1.41	2.28	-.34	-.28	.12
418	4	5.88	.93	-1.58	1.96	-.26	-.29	.14
419	1	5.85	2.95	-1.49	2.63	.28	-.36	.14
419	2	2.81	3.86	-1.29	2.90	.35	-.38	.11
419	3	-.23	4.75	-1.20	3.22	.23	-.32	.12

TABLE III.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
420	1	0.00	4.10	-0.50	3.31	0.18	-0.27	0.11
420	2	3.00	2.84	-.65	2.80	0.21	-0.35	.09
421	1	5.82	1.01	-1.63	1.98	-.39	-.33	.09
421	2	5.85	2.16	-1.63	2.44	-.16	-.29	.12
421	3	5.80	3.41	-1.70	2.85	.21	-.36	.13
421	4	5.78	4.74	-1.83	3.35	.59	-.39	.12
422	1	-.21	.39	-1.59	1.60	-.97	-.34	.19
422	2	-.22	1.02	-1.42	1.82	-.81	-.34	.13
422	3	-.27	2.01	-1.37	2.09	-.52	-.40	.11
422	4	-.29	2.99	-1.35	2.51	-.23	-.41	.14
422	5	-.25	3.96	-1.26	2.89	.05	-.36	.08
422	6	-.21	4.95	-1.35	3.30	.33	-.33	.16
423	1	-3.27	1.19	-1.20	1.65	-.93	-.35	.06
423	2	-3.28	2.00	-1.34	1.96	-.71	-.35	.18
423	3	-3.19	3.00	-1.15	2.41	-.45	-.24	.11
423	4	-3.29	3.97	-1.04	2.67	-.16	-.36	.08
423	5	-3.27	4.97	-1.22	3.12	.11	-.33	.20
424	1	-6.32	1.96	-1.16	1.65	-.95	-.39	.13
424	2	-6.33	3.00	-1.04	1.95	-.67	-.40	.11
424	3	-6.29	3.97	-1.01	2.36	-.41	-.33	.13
424	4	-6.29	4.96	-.84	2.76	-.13	-.32	.07
424	5	-6.33	5.93	-.84	3.05	.16	-.36	.08
424	6	-6.32	6.93	-.96	3.44	.45	-.35	.13
424	7	-6.32	7.89	-.94	3.76	.72	-.33	.12
425	1	-6.20	1.94	-1.15	1.69	-1.00	-.28	.11
425	2	-6.24	2.97	-1.02	1.99	-.72	-.32	.12
425	3	-6.25	3.97	-1.00	2.34	-.44	-.33	.12
425	4	-6.27	4.95	-.93	2.73	-.16	-.35	.12
425	5	-6.28	5.93	-.91	3.07	.12	-.34	.12
425	6	-6.26	6.93	-.92	3.50	.42	-.30	.13
425	7	-6.24	7.92	-.85	3.84	.72	-.30	.12
426	1	-3.31	1.17	-1.45	1.62	-.98	-.35	.16
426	2	-3.33	1.99	-1.27	1.86	-.75	-.39	.11
426	3	-3.30	3.00	-1.22	2.23	-.46	-.33	.11
426	4	-3.31	3.97	-1.16	2.63	-.20	-.33	.14
426	5	-3.37	4.94	-1.10	2.99	.10	-.39	.11
426	6	-3.20	5.94	-1.07	3.47	.38	-.29	.11
427	1	-.19	.37	-1.55	1.57	-.97	-.32	.14
427	2	-.18	1.01	-1.38	1.80	-.81	-.30	.06
427	3	-.23	2.00	-1.42	2.10	-.52	-.36	.14
427	4	-.27	2.99	-1.38	2.46	-.22	-.39	.14
427	5	-.27	3.97	-1.30	2.81	.08	-.41	.12
427	6	-.15	4.95	-1.26	3.33	.37	-.28	.14
428	1	-.13	.08	-.87	1.50	-1.08	-.33	.09
428	2	-.12	1.02	-.74	1.83	-.76	-.35	.11
428	3	-.07	2.01	-.54	2.28	-.46	-.31	.05

TABLE III.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{Tpp}$ , deg	$V_{\infty}$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
428	4	-0.11	2.97	-0.51	2.73	-0.17	-0.33	0.10
428	5	-.11	3.96	-.42	3.19	.13	-.36	.08
428	6	-.10	4.95	-.38	3.69	.45	-.37	.08
429	1	-3.25	1.05	-.85	1.67	-1.03	-.37	.18
429	2	-3.20	2.00	-.60	2.02	-.76	-.35	.11
429	3	-3.13	2.97	-.56	2.50	-.46	-.31	.14
429	4	-3.10	3.96	-.36	3.02	-.21	-.28	.10
429	5	-3.12	4.97	-.34	3.49	.11	-.31	.10
429	6	-3.15	5.93	-.21	3.93	.41	-.33	.08
430	1	-6.17	2.08	-.56	1.79	-1.01	-.33	.12
430	2	-6.12	2.98	-.37	2.20	-.76	-.28	.09
430	3	-6.10	3.98	-.23	2.60	-.48	-.28	.05
430	4	-6.14	4.95	-.17	3.03	-.18	-.32	.07
430	5	-6.16	5.92	-.14	3.46	.12	-.36	.10
430	6	-6.13	6.91	-.03	3.94	.43	-.37	.06
430	7	-6.14	7.90	-.11	4.45	.72	-.35	.13
431	1	-6.20	2.14	-.72	1.69	-1.01	-.35	.16
431	2	-6.16	2.98	-.50	2.10	-.77	-.32	.12
431	3	-6.12	3.95	-.37	2.47	-.47	-.35	.10
431	4	-6.08	4.94	-.23	2.99	-.18	-.32	.08
431	5	-6.07	5.93	-.05	3.42	.12	-.33	.03
431	6	-6.01	6.91	-.17	3.92	.44	-.30	.13
431	7	-6.03	7.55	-.02	4.27	.62	-.29	.07
432	1	-3.01	1.09	-.75	1.65	-1.00	-.26	.07
432	2	-3.09	1.98	-.66	1.91	-.72	-.35	.08
432	3	-3.08	2.98	-.50	2.37	-.42	-.39	.07
432	4	-2.97	3.97	-.44	2.98	-.13	-.26	.10
432	5	-2.99	4.93	-.32	3.39	.19	-.32	.08
432	6	-3.01	5.95	-.33	3.89	.50	-.32	.12
432	7	-2.92	6.90	-.21	4.49	.77	-.25	.10
433	1	-.13	.07	-.93	1.48	-.98	-.29	.09
433	2	-.18	1.01	-.84	1.74	-.68	-.39	.11
433	3	.00	2.02	-.70	2.28	-.38	-.24	.09
433	4	-.04	2.97	-.51	2.72	-.07	-.27	.05
433	5	-.07	3.97	-.56	3.09	.26	-.38	.11
433	6	.01	4.92	-.44	3.76	.53	-.27	.09
433	7	-.08	5.93	-.32	4.19	.83	-.38	.10

TABLE III- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
400	2	0.000	0.550	0.000	0.1467	0.0110	0.0002	0.0016
400	3	.000	.549	.000	.2376	.0163	.0001	.0018
400	4	.000	.549	.000	.3285	.0221	.0000	.0020
400	5	.000	.548	.000	.4168	.0287	.0000	.0024
400	6	.000	.548	.000	.5044	.0360	.0000	.0027
400	7	.000	.548	.000	.5630	.0431	.0001	.0032
400	8	.000	.549	.000	.6170	.0508	.0001	.0037
400	9	.000	.548	.000	.6606	.0595	.0001	.0044
400	10	.000	.548	.000	.6880	.0676	.0003	.0052
400	11	.000	.547	.000	.7091	.0768	.0004	.0061
400	12	.000	.549	.000	.7348	.0865	.0005	.0070
400	13	.000	.548	.000	.7419	.0954	.0006	.0080
400	14	.000	.549	.000	.7643	.1072	.0006	.0093
401	1	.000	.613	.000	.1427	.0108	-.0003	.0016
401	2	.000	.613	.000	.2268	.0157	-.0002	.0017
401	3	.000	.613	.000	.3220	.0217	-.0002	.0020
401	4	.000	.613	.000	.4132	.0279	-.0002	.0023
401	5	.000	.613	.000	.4914	.0348	-.0001	.0027
401	6	.000	.613	.000	.5609	.0419	.0000	.0031
401	7	.000	.613	.000	.6285	.0506	.0001	.0037
401	8	.000	.613	.000	.6693	.0587	.0002	.0043
401	9	.000	.613	.000	.7017	.0670	.0004	.0050
401	10	.000	.614	.000	.7176	.0759	.0004	.0059
401	11	.000	.614	.000	.7418	.0858	.0007	.0068
401	12	.000	.615	.000	.7511	.0956	.0009	.0079
402	1	.000	.631	.000	.1465	.0109	-.0001	.0016
402	2	.000	.631	.000	.2366	.0161	-.0001	.0017
402	3	.000	.631	.000	.3283	.0217	.0000	.0020
402	4	.000	.631	.000	.4100	.0276	.0000	.0023
402	5	.000	.630	.000	.4954	.0346	.0001	.0026
402	6	.000	.631	.000	.5687	.0424	.0001	.0031
402	7	.000	.630	.000	.6237	.0501	.0002	.0036
402	8	.000	.630	.000	.6612	.0577	.0003	.0042
402	9	.000	.630	.000	.6932	.0662	.0004	.0050
402	10	.000	.630	.000	.7254	.0761	.0006	.0058
402	11	.000	.630	.000	.7349	.0848	.0006	.0068
402	12	.000	.631	.000	.7657	.0965	.0010	.0079
403	1	.000	.637	.000	.1418	.0106	-.0001	.0016
403	2	.000	.637	.000	.2317	.0157	-.0001	.0017
403	3	.000	.637	.000	.3322	.0220	-.0001	.0020
403	4	.000	.637	.000	.4193	.0281	-.0001	.0023
403	5	.000	.638	.000	.4975	.0348	.0000	.0026
403	6	.000	.638	.000	.5622	.0419	.0000	.0031
403	7	.000	.638	.000	.6247	.0499	.0001	.0036
403	8	.000	.637	.000	.6692	.0583	.0002	.0042
403	9	.000	.638	.000	.6998	.0667	.0003	.0050

TABLE III.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
403	10	0.000	0.637	0.000	0.7238	0.0757	0.0004	0.0058
403	11	.000	.638	.000	.7385	.0846	.0005	.0067
403	12	.000	.639	.000	.7567	.0952	.0007	.0078
404	1	.116	.700	50.085	.9746	.0864	-.0088	.0053
404	2	.117	.703	50.384	1.0306	.0866	-.0052	.0050
404	3	.115	.702	49.429	1.0832	.0868	-.0024	.0048
405	9	.000	.548	.000	.2045	.0142	-.0002	.0017
405	10	.000	.547	.000	.2973	.0202	-.0003	.0020
405	11	.000	.547	.000	.3777	.0260	-.0005	.0022
405	12	.000	.547	.000	.4707	.0333	-.0007	.0026
405	13	.000	.548	.000	.5418	.0407	-.0008	.0031
405	14	.000	.547	.000	.5983	.0479	-.0009	.0035
405	15	.000	.547	.000	.6563	.0569	-.0009	.0042
405	16	.000	.547	.000	.6982	.0672	-.0010	.0050
405	17	.000	.548	.000	.7107	.0747	-.0009	.0058
405	18	.000	.549	.000	.7360	.0844	-.0008	.0067
405	19	.000	.547	.000	.7471	.0942	-.0009	.0078
405	20	.000	.546	.000	.7557	.1031	-.0007	.0088
406	1	.000	.612	.000	.1880	.0137	-.0019	.0017
406	2	.000	.611	.000	.2806	.0194	-.0020	.0019
406	3	.000	.611	.000	.3727	.0255	-.0020	.0022
406	4	.000	.612	.000	.4526	.0317	-.0021	.0025
406	5	.000	.611	.000	.5403	.0401	-.0021	.0030
406	6	.000	.611	.000	.6029	.0480	-.0021	.0035
406	7	.000	.611	.000	.6433	.0558	-.0020	.0041
406	8	.000	.611	.000	.6894	.0648	-.0020	.0048
406	9	.000	.611	.000	.7224	.0747	-.0020	.0057
406	10	.000	.611	.000	.7466	.0854	-.0019	.0067
406	11	.000	.610	.000	.7598	.0948	-.0017	.0077
407	1	.000	.629	.000	.1861	.0135	-.0028	.0017
407	2	.000	.629	.000	.2750	.0192	-.0029	.0019
407	3	.000	.628	.000	.3660	.0252	-.0030	.0022
407	4	.000	.629	.000	.4560	.0319	-.0029	.0025
407	5	.000	.628	.000	.5397	.0400	-.0029	.0030
407	6	.000	.629	.000	.6066	.0480	-.0029	.0035
407	7	.000	.628	.000	.6479	.0556	-.0029	.0041
407	8	.000	.628	.000	.6884	.0646	-.0029	.0048
407	9	.000	.629	.000	.7176	.0737	-.0028	.0056
407	10	.000	.629	.000	.7366	.0836	-.0027	.0066
407	11	.000	.629	.000	.7596	.0947	-.0026	.0077
407	12	.000	.629	.000	.7603	.1039	-.0025	.0089
408	1	.000	.636	.000	.1859	.0136	-.0039	.0017
408	2	.000	.635	.000	.2771	.0192	-.0038	.0019
408	3	.000	.635	.000	.3668	.0253	-.0037	.0022
408	4	.000	.635	.000	.4537	.0324	-.0035	.0026
408	5	.000	.635	.000	.5313	.0396	-.0034	.0030

TABLE III.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
408	6	0.000	0.636	0.000	0.6026	0.0477	-0.0032	0.0035
408	7	.000	.635	.000	.6536	.0564	-.0030	.0041
408	8	.000	.635	.000	.6948	.0649	-.0028	.0048
408	9	.000	.636	.000	.7190	.0741	-.0026	.0057
408	10	.000	.636	.000	.7419	.0842	-.0024	.0066
408	11	.000	.635	.000	.7505	.0936	-.0021	.0077
409	3	.117	.696	50.299	1.1002	.0876	-.0051	.0048
409	4	.117	.698	49.992	1.1839	.0866	-.0036	.0043
409	5	.116	.699	49.670	1.5435	.0853	.0043	.0033
409	6	.115	.697	49.348	1.7023	.0853	.0079	.0030
410	2	.114	.695	48.814	1.0373	.0863	-.0047	.0049
410	3	.112	.693	48.106	1.5774	.0860	.0103	.0033
410	4	.113	.690	48.433	1.7477	.0852	.0134	.0029
410	5	.117	.689	50.335	2.1608	.0857	.0159	.0024
411	1	.140	.702	60.079	3.4323	.0857	.0155	.0015
411	2	.140	.706	60.087	2.7391	.0862	.0115	.0019
411	3	.141	.709	60.359	2.2226	.0867	.0062	.0023
411	4	.140	.711	60.107	1.8602	.0861	.0033	.0027
411	5	.141	.714	60.375	1.6077	.0855	.0002	.0031
411	6	.139	.713	59.845	1.3965	.0866	-.0027	.0037
411	7	.139	.711	59.603	1.1177	.0849	-.0080	.0045
412	3	.165	.733	70.748	1.1688	.0870	-.0013	.0044
412	4	.164	.734	70.294	1.3074	.0866	.0022	.0039
413	2	.163	.732	69.747	1.5600	.0859	.0078	.0033
413	3	.163	.732	69.773	1.8873	.0847	.0111	.0027
413	4	.163	.730	69.781	2.2672	.0853	.0140	.0022
413	5	.162	.727	69.565	2.9814	.0852	.0173	.0017
413	6	.162	.724	69.569	4.1139	.0844	.0205	.0012
414	2	.186	.737	79.713	1.0919	.0860	-.0051	.0047
414	3	.186	.739	79.734	1.2727	.0865	-.0010	.0040
414	4	.186	.741	79.931	1.4450	.0860	.0019	.0035
414	5	.184	.740	79.135	1.7336	.0852	.0052	.0029
414	6	.184	.740	79.112	2.1159	.0849	.0077	.0024
414	7	.186	.739	79.919	2.8680	.0857	.0105	.0018
414	8	.186	.737	79.737	3.8745	.0850	.0118	.0013
414	9	.186	.733	79.721	5.7996	.0854	.0143	.0009
415	1	.200	.696	80.187	4.5488	.0856	.0116	.0011
415	2	.200	.698	80.006	2.5344	.0853	.0070	.0020
415	3	.200	.700	80.024	1.8418	.0858	.0028	.0028
416	1	.149	.671	59.866	1.3620	.0638	.0017	.0024
416	2	.149	.671	59.593	1.7395	.0634	.0052	.0019
416	3	.149	.668	59.859	2.3078	.0632	.0086	.0014
417	1	.150	.669	60.243	2.5305	.0852	.0110	.0020
418	2	.151	.728	65.627	1.4344	.0648	.0020	.0023
418	3	.151	.727	65.633	1.8263	.0642	.0044	.0018
418	4	.151	.724	65.391	2.5471	.0639	.0068	.0013
419	1	.150	.723	64.986	2.6687	.0857	.0086	.0019

TABLE III.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
419	2	0.152	0.727	65.963	1.9935	0.0868	0.0043	0.0026
419	3	.152	.728	65.977	1.5270	.0864	-.0005	.0034
420	1	.201	.757	87.254	1.8466	.0858	.0007	.0027
420	2	.200	.757	86.885	2.8537	.0859	.0055	.0018
421	1	.141	.710	60.395	2.2950	.0623	.0061	.0014
421	2	.140	.709	60.032	2.3655	.0742	.0073	.0017
421	3	.138	.708	59.408	2.2976	.0862	.0088	.0022
421	4	.137	.708	58.772	2.0828	.0978	.0102	.0030
422	1	.151	.702	63.121	.9857	.0397	-.0005	.0016
422	2	.149	.700	62.329	1.1454	.0463	-.0005	.0018
422	3	.148	.699	61.994	1.3755	.0573	-.0003	.0020
422	4	.148	.699	61.933	1.4789	.0674	-.0002	.0024
422	5	.148	.698	61.613	1.5294	.0774	-.0002	.0028
422	6	.147	.698	61.290	1.4994	.0865	-.0002	.0034
423	1	.150	.700	62.867	.8563	.0402	-.0025	.0019
423	2	.150	.700	62.819	1.0028	.0486	-.0028	.0022
423	3	.150	.699	62.500	1.1094	.0584	-.0034	.0026
423	4	.150	.698	62.441	1.2033	.0687	-.0037	.0030
423	5	.149	.698	62.138	1.2432	.0784	-.0042	.0036
424	1	.149	.697	62.379	.7320	.0401	-.0044	.0022
424	2	.149	.697	62.305	.8682	.0505	-.0054	.0027
424	3	.148	.696	61.992	.9602	.0602	-.0064	.0031
424	4	.148	.696	61.929	1.0204	.0700	-.0075	.0037
424	5	.148	.694	61.611	1.0600	.0801	-.0083	.0044
424	6	.147	.692	61.032	1.0813	.0898	-.0093	.0051
424	7	.146	.691	60.714	1.0795	.1000	-.0103	.0060
425	1	.151	.724	65.586	.7174	.0395	-.0041	.0022
425	2	.152	.724	65.759	.8641	.0504	-.0051	.0027
425	3	.151	.723	65.448	.9647	.0607	-.0061	.0031
425	4	.151	.723	65.378	1.0327	.0706	-.0071	.0037
425	5	.149	.723	64.827	1.0632	.0803	-.0080	.0044
425	6	.149	.722	64.513	1.0859	.0908	-.0091	.0051
425	7	.148	.720	64.208	1.0752	.1008	-.0100	.0060
426	1	.152	.727	65.817	.8351	.0396	-.0019	.0019
426	2	.151	.726	65.512	1.0038	.0486	-.0022	.0022
426	3	.151	.727	65.455	1.1274	.0591	-.0027	.0026
426	4	.150	.726	65.150	1.1965	.0687	-.0031	.0030
426	5	.150	.725	65.072	1.2585	.0792	-.0036	.0036
426	6	.149	.726	64.755	1.2402	.0884	-.0042	.0043
427	1	.151	.728	65.573	.9820	.0398	.0001	.0016
427	2	.150	.728	65.270	1.1268	.0464	.0001	.0018
427	3	.150	.728	65.196	1.3540	.0573	.0004	.0020
427	4	.150	.727	65.129	1.4772	.0680	.0005	.0024
427	5	.149	.727	64.575	1.5228	.0778	.0006	.0029
427	6	.149	.726	64.507	1.5069	.0879	.0005	.0035
428	1	.203	.732	84.851	1.0857	.0403	.0010	.0015
428	2	.203	.731	84.615	1.4900	.0525	.0012	.0016

TABLE III.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
428	3	0.202	0.731	84.374	1.6749	0.0631	0.0012	0.0019
428	4	.202	.731	84.523	1.8487	.0738	.0014	.0022
428	5	.202	.729	84.102	1.9110	.0841	.0015	.0026
428	6	.201	.730	84.054	1.8789	.0948	.0016	.0031
429	1	.203	.731	85.068	.8558	.0395	-.0009	.0019
429	2	.202	.731	84.642	1.0591	.0501	-.0015	.0021
429	3	.202	.730	84.590	1.2390	.0612	-.0019	.0025
429	4	.202	.730	84.549	1.2961	.0707	-.0025	.0029
429	5	.202	.729	84.307	1.3789	.0818	-.0029	.0034
429	6	.203	.728	84.449	1.3992	.0921	-.0033	.0040
430	1	.203	.728	85.077	.6908	.0393	-.0031	.0023
430	2	.203	.727	84.654	.8314	.0489	-.0041	.0026
430	3	.202	.726	84.226	.9416	.0594	-.0051	.0031
430	4	.201	.725	84.000	1.0365	.0700	-.0061	.0036
430	5	.201	.725	83.945	1.1068	.0810	-.0071	.0042
430	6	.202	.726	84.283	1.1378	.0916	-.0080	.0049
430	7	.201	.727	84.036	1.1346	.1016	-.0090	.0058
431	1	.202	.755	87.657	.7305	.0409	-.0030	.0023
431	2	.201	.753	87.236	.8442	.0495	-.0039	.0026
431	3	.201	.754	87.371	.9765	.0605	-.0049	.0031
431	4	.201	.754	87.141	1.0576	.0710	-.0059	.0036
431	5	.201	.752	86.909	1.0996	.0815	-.0070	.0043
431	6	.200	.755	87.040	1.1268	.0920	-.0078	.0050
431	7	.200	.754	86.824	1.1280	.0987	-.0086	.0056
432	1	.202	.758	87.662	.8458	.0399	-.0010	.0019
432	2	.201	.757	87.422	1.0707	.0504	-.0013	.0021
432	3	.202	.757	87.548	1.2529	.0621	-.0017	.0025
432	4	.201	.757	87.315	1.3391	.0723	-.0023	.0029
432	5	.201	.757	87.444	1.4032	.0828	-.0026	.0034
432	6	.200	.757	87.011	1.4076	.0935	-.0030	.0041
432	7	.200	.756	86.784	1.3656	.1032	-.0038	.0049
433	1	.202	.760	88.007	1.1000	.0407	.0011	.0015
433	2	.202	.759	87.576	1.4868	.0526	.0013	.0016
433	3	.201	.759	87.342	1.6680	.0636	.0012	.0019
433	4	.201	.758	87.108	1.8356	.0745	.0013	.0022
433	5	.200	.757	86.863	1.9343	.0857	.0017	.0026
433	6	.201	.758	87.359	1.8611	.0951	.0015	.0032
433	7	.202	.759	87.479	1.7919	.1054	.0018	.0039



TABLE IV.- UH-60 ROTOR WITH SWEPT NEW AIRFOIL TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{Tpp}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
500	2	-0.36	0.04	0.00	-0.01	-1.28	-0.34	-0.09
500	3	-.32	1.04	.00	-.01	-1.13	-.31	-.09
500	4	-.31	2.00	.00	-.01	-.97	-.32	-.09
500	5	-.23	3.00	.00	-.01	-.81	-.25	-.08
500	6	-.28	3.98	.00	-.01	-.64	-.32	-.10
500	7	-.26	4.96	.00	-.01	-.45	-.32	-.12
500	8	-.20	5.98	.00	-.01	-.24	-.30	-.15
500	9	-.15	6.96	.00	-.01	-.03	-.26	-.09
500	10	-.13	7.92	.00	-.01	.22	-.27	-.07
500	11	-.07	8.89	.00	-.01	.45	-.23	-.06
500	12	-.03	9.88	.00	-.01	.69	-.20	-.10
500	13	-.02	10.87	.00	-.01	.98	-.23	-.15
501	1	-.25	.04	.00	-.01	-1.30	-.25	-.07
501	2	-.33	1.04	.00	-.01	-1.17	-.34	-.08
501	3	-.25	2.01	.00	-.01	-1.02	-.27	-.12
501	4	-.21	3.02	.00	-.01	-.86	-.25	-.12
501	5	-.12	3.99	.00	-.01	-.68	-.19	-.13
501	6	-.14	4.97	.00	-.01	-.50	-.23	-.16
501	7	-.12	5.97	.00	-.01	-.31	-.24	-.15
501	8	-.11	6.93	.00	-.01	-.10	-.27	-.16
501	9	-.09	7.93	.00	-.01	.14	-.28	-.17
501	10	-.07	8.95	.00	-.01	.39	-.28	-.11
501	11	.02	9.88	.00	-.01	.62	-.23	-.14
502	1	-.29	.05	.00	-.01	-1.32	-.28	-.06
502	2	-.27	1.04	.00	-.01	-1.19	-.28	-.05
502	3	-.27	2.01	.00	-.01	-1.03	-.31	-.11
502	4	-.21	2.98	.00	-.01	-.88	-.26	-.09
502	5	-.20	3.98	.00	-.01	-.70	-.29	-.16
502	6	-.15	4.99	.00	-.01	-.53	-.27	-.09
502	7	-.11	5.93	.00	-.01	-.32	-.24	-.14
502	8	-.13	6.92	.00	-.01	-.13	-.30	-.09
502	9	-.04	7.90	.00	-.01	.10	-.24	-.08
502	10	-.03	8.90	.00	-.01	.36	-.27	-.17
503	1	-.29	.01	.00	-.01	-1.33	-.29	-.12
503	2	-.26	1.00	.00	-.01	-1.20	-.27	-.10
503	3	-.22	1.98	.00	-.01	-1.05	-.27	-.15
503	4	-.21	3.01	.00	-.01	-.88	-.26	-.10
503	5	-.21	3.94	.00	-.01	-.73	-.29	-.12
503	6	-.14	4.93	.00	-.01	-.55	-.25	-.14
503	7	-.11	5.89	.00	-.01	-.35	-.24	-.17
503	8	-.11	6.90	.00	-.01	-.14	-.28	-.15
503	9	-.07	7.91	.00	-.01	.09	-.28	-.11
503	10	-.03	8.86	.00	-.01	.32	-.28	-.11
503	11	.03	9.88	.00	-.01	.57	-.25	-.06
503	12	.09	10.87	.00	-.01	.84	-.22	-.11

TABLE IV.- Continued.

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
504	1	-0.28	0.06	0.00	-0.01	-1.31	-0.28	-0.08
504	2	-.26	2.02	.00	-.01	-1.03	-.29	-.04
504	3	-.17	4.02	.00	-.01	-.71	-.26	-.09
504	4	-.12	6.00	.00	-.01	-.31	-.25	-.14
504	5	-.05	7.99	.00	-.01	.12	-.24	-.08
504	6	.02	9.91	.00	-.01	.61	-.25	-.08
504	7	.06	10.90	.00	-.01	.83	-.24	-.08
505	2	-5.92	7.68	-1.24	3.86	.63	.16	.05
505	3	-3.90	7.29	-1.58	3.94	.65	.15	.19
505	4	-1.79	6.86	-1.72	4.10	.64	.23	.19
505	5	2.18	5.91	-2.01	4.08	.64	.16	.22
506	2	-6.05	7.46	-1.05	4.14	1.01	.19	.12
506	3	-3.92	6.94	-1.19	4.08	.97	.12	.15
506	4	-1.90	6.31	-1.46	4.12	.95	.21	.20
506	5	.12	5.84	-1.53	4.12	.94	.18	.17
506	6	2.06	5.22	-1.72	3.92	.91	.08	.22
506	7	4.27	4.65	-1.81	3.83	.95	.13	.21
506	8	6.21	4.14	-1.79	3.75	.95	.13	.17
506	9	8.23	3.66	-1.64	3.63	.94	.20	.03
506	10	10.17	2.97	-1.72	2.98	.89	.00	.05
507	1	10.35	2.32	-1.49	3.11	.91	.09	.19
507	2	8.10	2.80	-1.50	3.11	.88	.03	.20
507	3	6.21	3.56	-1.40	3.56	.86	.13	.18
507	4	4.15	4.13	-1.35	3.77	.86	.12	.20
507	5	2.29	4.79	-1.09	4.03	.86	.15	.07
507	6	.07	5.44	-1.10	4.04	.82	.11	.12
508	3	1.85	5.28	-1.39	3.58	1.09	-.16	.06
508	4	3.99	4.81	-1.78	3.73	1.10	.00	.23
508	5	5.96	4.17	-1.88	3.36	1.10	-.09	.22
509	1	-.07	5.39	-1.11	3.68	1.09	-.15	.18
509	2	-2.05	5.94	-.84	3.81	1.07	-.08	.07
510	1	10.19	1.63	-1.01	2.78	1.05	-.11	.14
510	2	8.16	2.23	-.96	2.95	1.05	-.10	.15
510	3	6.14	2.86	-.88	3.10	1.06	-.10	.12
510	4	4.13	3.54	-.80	3.28	1.04	-.08	.07
510	5	1.98	4.25	-.81	3.45	1.02	-.17	.16
510	6	.00	5.17	-.68	3.81	1.07	-.11	.11
510	7	-2.02	5.79	-.59	3.88	1.05	-.13	.14
511	3	-.40	3.30	-1.06	2.56	.00	-.39	.06
511	4	2.62	2.37	-1.26	2.34	-.03	-.40	.10
511	5	5.69	1.61	-1.31	2.15	.00	-.35	.08
512	1	5.68	3.93	-1.35	2.94	.64	-.38	.08
512	2	5.68	3.93	-1.35	2.94	.62	-.37	.06
512	3	2.65	4.75	-1.33	3.29	.62	-.32	.09
512	4	-.44	5.59	-1.13	3.47	.62	-.37	.11
513	1	-.33	5.06	-.42	3.57	.63	-.44	.11
513	2	2.71	3.87	-.50	3.14	.60	-.46	.11

TABLE IV.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
513	3	5.69	2.81	-0.57	2.85	0.59	-0.47	0.12
514	1	5.68	1.52	-1.38	2.04	-.03	-.38	.11
514	2	2.64	2.32	-1.32	2.24	-.04	-.38	.09
514	3	-.39	3.19	-1.15	2.43	-.03	-.38	.06
515	1	-.33	5.59	-1.25	3.42	.57	-.31	.12
515	2	2.65	4.73	-1.41	3.15	.58	-.40	.14
515	3	5.68	3.79	-1.58	2.74	.58	-.42	.16
516	1	5.87	2.73	-.55	2.83	.57	-.41	.06
516	2	2.86	3.75	-.61	3.05	.54	-.38	.11
516	3	-.20	5.00	-.54	3.52	.53	-.35	.14
517	20	-6.27	4.82	-2.22	1.53	-.38	-.28	.19
517	21	-.30	3.16	-2.39	1.02	-.42	-.43	.20
517	22	2.70	2.30	-2.39	.83	-.49	-.40	.19
517	23	5.74	1.45	-2.11	.70	-.52	-.41	.11
518	3	-.21	5.84	-1.14	3.43	.22	-.38	.17
518	4	5.93	3.94	-1.59	2.82	.18	-.36	.24
518	5	2.87	5.42	-1.08	3.60	.33	-.31	.01
519	1	-.01	5.18	-.50	3.57	.16	-.36	.20
519	2	3.06	3.87	-.68	3.17	.14	-.32	.21
519	3	6.10	2.83	-.77	2.91	.17	-.37	.24
520	1	5.80	.20	-1.65	1.55	-.92	-.38	.18
520	2	5.90	2.02	-1.62	2.26	-.45	-.26	.15
520	3	5.84	2.94	-1.50	2.43	-.19	-.35	.08
520	4	5.80	3.66	-1.83	2.61	-.01	-.40	.23
520	5	5.87	5.21	-1.72	3.53	.39	-.32	.16
521	3	-.23	5.52	-1.06	3.23	.96	-.43	.04
521	4	2.90	4.62	-1.39	3.07	.92	-.40	.12
521	5	5.89	3.69	-1.57	2.70	.89	-.39	.16
522	1	6.08	2.59	-.57	2.77	.89	-.35	.09
522	2	3.04	3.67	-.78	2.91	.91	-.39	.18
522	3	-.02	4.87	-.52	3.42	.88	-.35	.12
523	1	5.84	1.51	-1.63	1.95	.22	-.38	.14
523	2	5.83	2.86	-1.70	2.37	.59	-.40	.17
523	3	5.86	4.10	-1.54	2.91	.88	-.38	.04
523	4	5.86	5.47	-1.62	3.45	1.25	-.40	.05
524	2	-6.31	2.61	-.59	1.82	-.49	-.35	.00
524	3	-6.42	3.61	-.86	2.01	-.20	-.45	.18
524	4	-6.25	4.63	-.82	2.65	.04	-.22	.16
524	5	-6.32	5.86	-.76	3.07	.36	-.29	.14
524	6	-6.46	6.84	-.98	3.23	.64	-.41	.26
524	7	-6.34	7.85	-.87	3.76	.78	-.28	.15
524	8	-6.32	8.94	-.83	4.17	1.06	-.27	.12
525	1	-3.32	1.78	-.80	1.78	-.64	-.38	.05
525	2	-3.43	2.85	-1.07	1.98	-.31	-.47	.22
525	3	-3.29	3.84	-1.05	2.57	-.04	-.30	.18
525	4	-3.32	4.99	-.93	2.99	.24	-.33	.14
525	5	-3.29	5.95	-.98	3.36	.50	-.31	.16

TABLE IV.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
525	6	-3.35	7.09	-0.89	3.76	0.81	-0.35	0.09
504	1	-.28	.06	.00	-.01	-1.31	-0.28	-.08
504	2	-.26	2.02	.00	-.01	-1.03	-.29	-.04
504	3	-.17	4.02	.00	-.01	-.71	-.26	-.09
504	4	-.12	6.00	.00	-.01	-.31	-.25	-.14
504	5	-.05	7.99	.00	-.01	.12	-.24	-.08
504	6	-.02	9.91	.00	-.01	.61	-.25	-.08
504	7	.06	10.90	.00	-.01	.83	-.24	-.08
505	2	-5.92	7.68	-1.24	3.86	.63	.16	.05
505	3	-3.90	7.29	-1.58	3.94	.65	.15	.19
505	4	-1.79	6.86	-1.72	4.10	.64	.23	.19
505	5	2.18	5.91	-2.01	4.08	.64	.16	.22
506	2	-6.05	7.46	-1.05	4.14	1.01	.19	.12
506	3	-3.92	6.94	-1.19	4.08	.97	.12	.15
506	4	-1.90	6.31	-1.46	4.12	.95	.21	.20
506	5	.12	5.84	-1.53	4.12	.94	.18	.17
506	6	2.06	5.22	-1.72	3.92	.91	.08	.22
506	7	4.27	4.65	-1.81	3.83	.95	.13	.21
506	8	6.21	4.14	-1.79	3.75	.95	.13	.17
506	9	8.23	3.66	-1.64	3.63	.94	.20	.03
506	10	10.17	2.97	-1.72	2.98	.89	.00	.05
507	1	10.35	2.32	-1.49	3.11	.91	.09	.19
507	2	8.10	2.80	-1.50	3.11	.88	.03	.20
507	3	6.21	3.56	-1.40	3.56	.86	.13	.18
507	4	4.15	4.13	-1.35	3.77	.86	.12	.20
507	5	2.29	4.79	-1.09	4.03	.86	.15	.07
507	6	.07	5.44	-1.10	4.04	.82	.11	.12
508	3	1.85	5.28	-1.39	3.58	1.09	-.16	.06
508	4	3.99	4.81	-1.78	3.73	1.10	.00	.23
508	5	5.96	4.17	-1.88	3.36	1.10	-.09	.22
509	1	-.07	5.39	-1.11	3.68	1.09	-.15	.18
509	2	-2.05	5.94	-.84	3.81	1.07	-.08	.07
510	1	10.19	1.63	-1.01	2.78	1.05	-.11	.14
510	2	8.16	2.23	-.96	2.95	1.05	-.10	.15
510	3	6.14	2.86	-.88	3.10	1.06	-.10	.12
510	4	4.13	3.54	-.80	3.28	1.04	-.08	.07
510	5	1.98	4.25	-.81	3.45	1.02	-.17	.16
510	6	.00	5.17	-.68	3.81	1.07	-.11	.11
510	7	-2.02	5.79	-.59	3.88	1.05	-.13	.14
511	3	-.40	3.30	-1.06	2.56	.00	-.39	.06
511	4	2.62	2.37	-1.26	2.34	-.03	-.40	.10
511	5	5.69	1.61	-1.31	2.15	.00	-.35	.08
512	1	5.68	3.93	-1.35	2.94	.64	-.38	.08
512	2	5.68	3.93	-1.35	2.94	.62	-.37	.06
512	3	2.65	4.75	-1.33	3.29	.62	-.32	.09
512	4	-.44	5.59	-1.13	3.47	.62	-.37	.11
513	1	-.33	5.06	-.42	3.57	.63	-.44	.11

TABLE IV.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
513	2	2.71	3.87	-0.50	3.14	0.60	-0.46	0.11
513	3	5.69	2.81	-.57	2.85	.59	-.47	.12
514	1	5.68	1.52	-1.38	2.04	-.03	-.38	.11
514	2	2.64	2.32	-1.32	2.24	-.04	-.38	.09
514	3	-.39	3.19	-1.15	2.43	-.03	-.38	.06
515	1	-.33	5.59	-1.25	3.42	.57	-.31	.12
515	2	2.65	4.73	-1.41	3.15	.58	-.40	.14
515	3	5.68	3.79	-1.58	2.74	.58	-.42	.16
516	1	5.87	2.73	-.55	2.83	.57	-.41	.06
516	2	2.86	3.75	-.61	3.05	.54	-.38	.11
516	3	-.20	5.00	-.54	3.52	.53	-.35	.14
517	20	-6.27	4.82	-2.22	1.53	-.38	-.28	.19
517	21	-.30	3.16	-2.39	1.02	-.42	-.43	.20
517	22	2.70	2.30	-2.39	.83	-.49	-.40	.19
517	23	5.74	1.45	-2.11	.70	-.52	-.41	.11
518	3	-.21	5.84	-1.14	3.43	.22	-.38	.17
518	4	5.93	3.94	-1.59	2.82	.18	-.36	.24
518	5	2.87	5.42	-1.08	3.60	.33	-.31	.01
519	1	-.01	5.18	-.50	3.57	.16	-.36	.20
519	2	3.06	3.87	-.68	3.17	.14	-.32	.21
519	3	6.10	2.83	-.77	2.91	.17	-.37	.24
520	1	5.80	.20	-1.65	1.55	-.92	-.38	.18
520	2	5.90	2.02	-1.62	2.26	-.45	-.26	.15
520	3	5.84	2.94	-1.50	2.43	-.19	-.35	.08
520	4	5.80	3.66	-1.83	2.61	-.01	-.40	.23
520	5	5.87	5.21	-1.72	3.53	.39	-.32	.16
521	3	-.23	5.52	-1.06	3.23	.96	-.43	.04
521	4	2.90	4.62	-1.39	3.07	.92	-.40	.12
521	5	5.89	3.69	-1.57	2.70	.89	-.39	.16
522	1	6.08	2.59	-.57	2.77	.89	-.35	.09
522	2	3.04	3.67	-.78	2.91	.91	-.39	.18
522	3	-.02	4.87	-.52	3.42	.88	-.35	.12
523	1	5.84	1.51	-1.63	1.95	.22	-.38	.14
523	2	5.83	2.86	-1.70	2.37	.59	-.40	.17
523	3	5.86	4.10	-1.54	2.91	.88	-.38	.04
523	4	5.86	5.47	-1.62	3.45	1.25	-.40	.05
524	2	-6.31	2.61	-.59	1.82	-.49	-.35	.00
524	3	-6.42	3.61	-.86	2.01	-.20	-.45	.18
524	4	-6.25	4.63	-.82	2.65	.04	-.22	.16
524	5	-6.32	5.86	-.76	3.07	.36	-.29	.14
524	6	-6.46	6.84	-.98	3.23	.64	-.41	.26
524	7	-6.34	7.85	-.87	3.76	.78	-.28	.15
524	8	-6.32	8.94	-.83	4.17	1.06	-.27	.12
525	1	-3.32	1.78	-.80	1.78	-.64	-.38	.05
525	2	-3.43	2.85	-1.07	1.98	-.31	-.47	.22
525	3	-3.29	3.84	-1.05	2.57	-.04	-.30	.18
525	4	-3.32	4.99	-.93	2.99	.24	-.33	.14

TABLE IV.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
525	5	-3.29	5.95	-0.98	3.36	0.50	-0.31	0.16
525	6	-3.35	7.09	-.89	3.76	.81	-.35	.09
526	1	-.27	1.01	-.85	1.86	-.64	-.30	-.02
526	2	-.44	1.95	-.95	1.93	-.37	-.46	.05
526	3	-.24	3.00	-1.14	2.61	-.10	-.24	.15
526	4	-.47	4.04	-1.14	2.61	.19	-.48	.17
526	5	-.22	5.17	-1.14	3.44	.48	-.21	.12
526	6	-.45	6.28	-1.20	3.49	.80	-.46	.17
527	3	-.38	1.00	-1.07	1.48	-.65	-.48	.03
527	4	-.22	2.06	-1.18	2.12	-.39	-.30	.08
527	5	-.34	3.07	-1.36	2.25	-.11	-.43	.21
527	6	-.17	4.11	-1.26	2.96	.16	-.22	.15
527	7	-.35	4.95	-1.26	2.96	.39	-.46	.17
528	1	-3.35	1.76	-1.06	1.62	-.66	-.43	.09
528	2	-3.25	2.77	-1.10	2.14	-.41	-.30	.14
528	3	-3.24	3.73	-1.00	2.52	-.14	-.27	.11
528	4	-3.23	4.90	-1.14	2.89	.16	-.28	.19
528	5	-3.36	6.00	-.97	3.12	.45	-.42	.11
529	1	-6.33	2.55	-1.08	1.61	-.65	-.43	.20
529	2	-6.22	3.54	-.97	2.12	-.40	-.29	.18
529	3	-6.35	4.51	-.83	2.30	-.14	-.42	.14
529	4	-6.33	5.60	-.79	2.72	.16	-.38	.13
529	5	-6.38	6.68	-.83	3.10	.45	-.40	.15
530	1	-6.34	2.42	-1.13	1.51	-.69	-.43	.19
530	2	-6.23	3.58	-.98	2.03	-.40	-.33	.16
530	3	-6.42	4.54	-.92	2.17	-.14	-.51	.18
530	4	-6.30	5.65	-.83	2.71	.17	-.39	.15
530	5	-6.26	6.60	-.86	3.11	.42	-.37	.16
530	7	-6.35	7.63	-.77	3.27	.68	-.49	.10
531	1	-3.22	1.81	-1.00	1.75	-.67	-.34	.04
531	3	-3.25	2.65	-1.24	1.92	-.46	-.38	.18
531	4	-3.30	3.78	-1.03	2.20	-.14	-.46	.09
531	6	-3.20	4.71	-.99	2.75	.11	-.33	.09
531	7	-3.18	5.83	-.88	3.24	.40	-.29	.02
531	8	-3.22	6.44	-.97	3.41	.58	-.33	.09
532	1	-.29	1.00	-1.18	1.52	-.83	-.42	.05
532	2	-.20	1.83	-1.46	1.94	-.64	-.32	.20
532	3	-.19	2.91	-1.33	2.28	-.36	-.33	.16
532	4	-.26	3.97	-1.27	2.62	-.08	-.40	.14
532	5	-.26	4.90	-1.14	2.97	.18	-.40	.09
533	2	-.23	.62	-.63	1.58	-1.56	-.43	.16
533	3	-.12	1.63	-.53	2.15	-1.31	-.29	.13
533	4	-.29	2.48	-.64	2.23	-1.02	-.50	.23
533	5	-.17	3.58	-.61	2.85	-.73	-.38	.20
533	6	-.15	4.41	-.36	3.29	-.51	-.35	.08
533	7	-.24	5.60	-.35	3.72	-.18	-.47	.13
533	8	-.14	6.62	-.43	4.41	.10	-.35	.18

TABLE IV.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
534	1	-3.14	1.68	-0.49	1.90	-1.54	-0.32	0.17
534	2	-3.16	2.68	-.39	2.29	-1.27	-.34	.15
534	3	-3.04	3.57	-.40	2.87	-1.04	-.21	.16
534	4	-3.03	4.58	-.39	3.33	-.77	-.20	.19
534	5	-3.14	5.64	-.45	3.60	-.48	-.33	.24
534	6	-3.25	6.61	-.23	3.91	-.18	-.48	.15
534	7	-3.20	7.61	-.15	4.48	.07	-.40	.11
535	1	-6.24	2.62	-.29	1.87	-1.53	-.40	.14
535	2	-6.20	3.62	-.18	2.36	-1.28	-.35	.13
535	3	-6.18	4.70	-.14	2.85	-.99	-.33	.12
535	4	-6.30	5.67	.05	3.11	-.72	-.46	.06
535	5	-6.32	6.67	-.09	3.50	-.46	-.51	.17
535	7	-6.16	8.89	-.02	4.76	.04	-.34	.11
535	8	-6.13	7.76	.07	4.31	-.27	-.29	.05
536	1	-6.21	2.68	-.41	1.70	-1.64	-.45	.15
536	2	-6.12	3.56	-.43	2.19	-1.41	-.35	.20
536	3	-6.13	4.63	-.19	2.65	-1.13	-.36	.12
536	4	-6.09	5.57	.08	3.15	-.89	-.33	-.01
536	5	-6.21	6.64	-.03	3.38	-.57	-.49	.08
536	6	-6.10	7.60	-.16	3.93	-.32	-.39	.17
536	7	-6.07	8.59	-.09	4.46	-.05	-.36	.16
537	1	-3.19	1.67	-.50	1.54	-1.66	-.47	.07
537	2	-3.10	2.59	-.54	2.05	-1.40	-.39	.12
537	3	-3.02	3.55	-.42	2.64	-1.14	-.30	.13
537	4	-3.16	4.47	-.24	2.80	-.87	-.48	.05
537	5	-3.09	5.46	-.22	3.37	-.62	-.41	.09
537	6	-3.08	6.48	-.23	3.79	-.34	-.43	.11
537	7	-3.11	7.25	-.21	4.11	-.14	-.48	.12
538	1	-.15	.58	-.69	1.40	-1.69	-.45	.09
538	2	-.10	1.43	-.76	1.76	-1.45	-.41	.14
538	3	.00	2.42	-.70	2.35	-1.37	-.30	.16
538	4	.01	3.45	-.53	2.82	-1.10	-.30	.09
538	5	.03	4.46	-.48	3.34	-.83	-.28	.11
538	6	.01	5.47	-.48	3.69	-.54	-.35	.14
538	7	.02	6.34	-.48	4.16	-.29	-.34	.17
539	1	-.10	.53	-.87	1.33	-1.91	-.43	.11
539	2	-.02	1.31	-.87	1.78	-1.71	-.35	.17
539	3	-.04	2.35	-.66	2.14	-1.39	-.40	.08
539	4	-.03	3.35	-.68	2.59	-1.11	-.41	.16
539	5	.05	4.42	-.61	3.18	-.82	-.34	.14
539	6	.10	5.35	-.55	3.69	-.57	-.29	.14
539	7	.04	6.30	-.34	4.01	-.30	-.40	.08
540	1	-3.10	1.55	-.61	1.53	-1.87	-.41	.06
540	2	-3.04	2.51	-.67	1.99	-1.61	-.36	.15
540	3	-3.00	3.62	-.42	2.51	-1.30	-.32	.05
540	4	-3.10	4.57	-.34	2.80	-1.04	-.47	.10
540	5	-2.98	5.42	-.32	3.41	-.81	-.33	.09

TABLE IV.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
540	6	-2.94	6.50	-0.12	3.95	-0.54	-0.29	0.00
540	7	-3.02	7.44	-.06	4.29	-.26	-.40	.01
541	1	-6.16	2.53	-.48	1.55	-1.86	-.45	.10
541	2	-6.00	3.60	-.25	2.29	-1.62	-.25	.05
541	3	-6.00	4.55	-.13	2.68	-1.34	-.28	.02
541	4	-6.09	5.50	-.10	2.89	-1.08	-.41	.05
541	5	-6.13	6.42	-.16	3.29	-.83	-.46	.14
541	6	-6.10	7.40	-.17	3.80	-.56	-.42	.17
541	7	-6.05	8.49	-.14	4.33	-.27	-.39	.19



TABLE IV.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	PM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
500	2	0.000	0.550	0.000	0.1765	0.0125	0.0001	0.0016
500	3	.000	.549	.000	.2717	.0178	.0000	.0018
500	4	.000	.549	.000	.3670	.0236	-.0001	.0020
500	5	.000	.549	.000	.4453	.0299	-.0002	.0023
500	6	.000	.549	.000	.5191	.0365	-.0001	.0027
500	7	.000	.549	.000	.5773	.0440	-.0001	.0032
500	8	.000	.550	.000	.6343	.0520	-.0001	.0038
500	9	.000	.550	.000	.6641	.0597	.0000	.0044
500	10	.000	.549	.000	.6963	.0689	.0001	.0052
500	11	.000	.549	.000	.7168	.0775	.0002	.0061
500	12	.000	.549	.000	.7315	.0863	.0002	.0070
500	13	.000	.549	.000	.7490	.0967	.0004	.0081
501	1	.000	.614	.000	.1724	.0120	-.0005	.0015
501	2	.000	.614	.000	.2591	.0172	-.0004	.0018
501	3	.000	.613	.000	.3535	.0229	-.0004	.0020
501	4	.000	.613	.000	.4418	.0293	-.0004	.0023
501	5	.000	.614	.000	.5193	.0363	-.0004	.0027
501	6	.000	.613	.000	.5804	.0434	-.0003	.0031
501	7	.000	.613	.000	.6265	.0506	-.0002	.0037
501	8	.000	.613	.000	.6715	.0588	.0000	.0043
501	9	.000	.613	.000	.6952	.0673	.0002	.0051
501	10	.000	.613	.000	.7273	.0768	.0002	.0059
501	11	.000	.613	.000	.7408	.0855	.0004	.0068
502	1	.000	.632	.000	.1649	.0117	-.0003	.0016
502	2	.000	.631	.000	.2646	.0171	-.0003	.0017
502	3	.000	.631	.000	.3533	.0228	-.0003	.0020
502	4	.000	.631	.000	.4387	.0288	-.0003	.0023
502	5	.000	.631	.000	.5176	.0358	-.0002	.0026
502	6	.000	.630	.000	.5864	.0432	-.0001	.0031
502	7	.000	.630	.000	.6386	.0508	-.0001	.0036
502	8	.000	.631	.000	.6726	.0582	.0001	.0042
502	9	.000	.630	.000	.7034	.0669	.0002	.0050
502	10	.000	.631	.000	.7334	.0763	.0003	.0058
503	1	.000	.638	.000	.1695	.0117	-.0003	.0015
503	2	.000	.638	.000	.2559	.0168	-.0003	.0017
503	3	.000	.638	.000	.3520	.0225	-.0003	.0019
503	4	.000	.638	.000	.4361	.0288	-.0002	.0023
503	5	.000	.638	.000	.5104	.0351	-.0001	.0026
503	6	.000	.638	.000	.5829	.0427	-.0002	.0031
503	7	.000	.637	.000	.6320	.0501	.0000	.0036
503	8	.000	.637	.000	.6701	.0582	.0001	.0042
503	9	.000	.638	.000	.7043	.0666	.0002	.0049
503	10	.000	.638	.000	.7273	.0753	.0003	.0057
503	11	.000	.638	.000	.7437	.0850	.0004	.0067
503	12	.000	.637	.000	.7556	.0950	.0006	.0078

TABLE IV.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
504	1	0.000	0.631	0.000	0.1802	0.0123	-0.0005	0.0015
504	2	.000	.630	.000	.3577	.0229	-.0004	.0020
504	3	.000	.630	.000	.5186	.0359	-.0004	.0026
504	4	.000	.630	.000	.6417	.0513	-.0002	.0037
504	5	.000	.629	.000	.7017	.0675	-.0001	.0050
504	6	.000	.631	.000	.7393	.0852	.0003	.0068
504	7	.000	.630	.000	.7457	.0939	.0003	.0078
505	2	.116	.699	49.861	.9662	.0855	-.0084	.0053
505	3	.117	.701	50.149	1.0497	.0863	-.0063	.0049
505	4	.117	.704	50.460	1.1272	.0862	-.0046	.0045
505	5	.117	.702	50.122	1.3555	.0859	.0021	.0037
506	2	.139	.713	59.985	1.0155	.0861	-.0087	.0051
506	3	.139	.715	59.977	1.1256	.0865	-.0063	.0046
506	4	.139	.716	59.994	1.2412	.0854	-.0046	.0041
506	5	.139	.718	59.962	1.3977	.0861	-.0021	.0036
506	6	.139	.717	59.686	1.6188	.0856	.0014	.0031
506	7	.139	.715	59.669	1.8597	.0856	.0047	.0027
506	8	.139	.714	59.924	2.1923	.0854	.0077	.0023
506	9	.140	.711	60.181	2.5979	.0858	.0107	.0020
506	10	.140	.707	60.172	3.5706	.0849	.0146	.0014
507	1	.162	.720	69.942	5.8296	.0848	.0151	.0009
507	2	.163	.724	70.186	4.0525	.0849	.0118	.0012
507	3	.163	.728	70.194	2.9118	.0862	.0084	.0018
507	4	.164	.730	70.451	2.2871	.0859	.0053	.0022
507	5	.163	.732	70.461	1.8270	.0860	.0023	.0028
507	6	.163	.731	69.981	1.5237	.0859	-.0008	.0033
508	3	.140	.722	60.251	1.5917	.0862	.0057	.0032
508	4	.139	.721	59.985	1.8361	.0864	.0086	.0028
508	5	.141	.719	60.499	2.2423	.0864	.0121	.0023
509	1	.164	.738	70.783	1.5364	.0861	.0033	.0033
509	2	.164	.737	70.792	1.3103	.0855	-.0002	.0038
510	1	.185	.738	79.785	12.6233	.0840	.0177	.0004
510	2	.186	.742	79.980	5.8515	.0844	.0141	.0009
510	3	.187	.746	80.377	3.7645	.0851	.0113	.0013
510	4	.187	.748	80.379	2.6941	.0853	.0083	.0019
510	5	.187	.751	80.578	2.0723	.0851	.0056	.0024
510	6	.186	.751	80.191	1.6413	.0867	.0027	.0031
510	7	.187	.751	80.587	1.3827	.0859	.0001	.0037
511	3	.150	.623	55.135	1.4118	.0639	.0039	.0023
511	4	.150	.623	55.136	1.7739	.0628	.0080	.0018
511	5	.150	.620	55.151	2.4657	.0636	.0119	.0013
512	1	.149	.620	55.035	2.4848	.0859	.0144	.0021
512	2	.149	.619	55.046	2.4433	.0850	.0141	.0021
512	3	.150	.622	55.340	1.8092	.0856	.0086	.0028
512	4	.150	.622	55.076	1.4531	.0860	.0031	.0035
513	1	.201	.650	74.053	1.7660	.0866	.0029	.0029
513	2	.202	.649	74.285	2.5693	.0860	.0083	.0020

TABLE IV.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
513	3	0.201	0.645	74.065	4.1922	0.0849	0.0133	0.0012
514	1	.149	.675	60.052	2.3161	.0632	.0101	.0014
514	2	.150	.678	60.319	1.7500	.0632	.0068	.0018
514	3	.149	.678	60.061	1.3468	.0637	.0038	.0024
515	1	.150	.679	60.190	1.4298	.0857	.0041	.0035
515	2	.149	.678	59.929	1.8066	.0858	.0091	.0028
515	3	.149	.675	59.925	2.4709	.0853	.0142	.0021
516	1	.200	.702	80.193	4.3648	.0850	.0153	.0012
516	2	.199	.704	80.031	2.5821	.0854	.0108	.0020
516	3	.200	.706	80.240	1.7494	.0863	.0061	.0029
517	20	.150	.731	65.313	.9668	.0633	-.0033	.0033
517	21	.149	.734	64.856	1.4615	.0637	.0043	.0022
517	22	.149	.733	64.871	1.8238	.0634	.0079	.0018
517	23	.150	.730	65.131	2.4513	.0631	.0113	.0013
518	3	.152	.723	65.021	1.5268	.0867	.0044	.0034
518	4	.152	.720	65.007	2.8082	.0852	.0142	.0018
518	5	.151	.729	64.974	1.8463	.0886	.0091	.0029
519	1	.205	.756	87.708	1.8974	.0870	.0055	.0027
519	2	.204	.755	87.356	2.9269	.0853	.0097	.0017
519	3	.204	.751	87.165	5.7001	.0854	.0138	.0009
520	1	.142	.708	60.304	1.8759	.0469	.0061	.0011
520	2	.141	.708	59.910	2.3215	.0642	.0077	.0014
520	3	.142	.708	60.095	2.4374	.0734	.0091	.0017
520	4	.135	.738	60.035	2.3448	.0731	.0093	.0017
520	5	.140	.710	59.675	2.1395	.0922	.0112	.0027
521	3	.150	.736	65.166	1.5012	.0859	.0097	.0034
521	4	.149	.733	64.954	1.9165	.0852	.0146	.0027
521	5	.149	.730	64.971	2.6301	.0841	.0192	.0019
522	1	.201	.761	87.367	5.0693	.0843	.0196	.0010
522	2	.200	.763	87.038	2.9295	.0863	.0146	.0018
522	3	.201	.765	87.256	1.8340	.0857	.0088	.0028
523	1	.139	.714	59.781	2.1248	.0601	.0118	.0014
523	2	.140	.715	60.199	2.3299	.0737	.0136	.0018
523	3	.139	.714	59.864	2.1805	.0847	.0147	.0023
523	4	.139	.714	59.784	2.0450	.0971	.0161	.0030
524	2	.150	.628	56.059	.7083	.0405	-.0032	.0023
524	3	.149	.627	55.724	.8730	.0505	-.0044	.0026
524	4	.149	.627	55.675	.9184	.0593	-.0060	.0032
524	5	.151	.628	56.435	.9985	.0714	-.0075	.0039
524	6	.150	.628	56.098	1.0439	.0808	-.0085	.0045
524	7	.149	.627	55.779	1.0563	.0897	-.0103	.0052
524	8	.149	.628	56.004	1.0426	.0994	-.0116	.0061
525	1	.149	.631	56.080	.8013	.0392	-.0033	.0020
525	2	.149	.630	56.007	1.0231	.0508	-.0035	.0023
525	3	.149	.630	55.681	1.1098	.0601	-.0042	.0027
525	4	.177	.545	55.903	1.3907	.0989	-.0066	.0045
525	5	.150	.630	56.120	1.2056	.0798	-.0051	.0038

TABLE IV.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
525	6	0.150	0.630	56.063	1.2130	0.0903	-0.0057	0.0045
526	1	.150	.633	56.339	.9605	.0402	-.0013	.0017
526	2	.149	.632	56.004	1.2242	.0501	-.0010	.0019
526	3	.149	.631	55.952	1.3342	.0597	-.0013	.0022
526	4	.149	.630	55.608	1.4498	.0699	-.0007	.0026
526	5	.149	.631	55.829	1.4307	.0796	-.0013	.0032
526	6	.150	.631	56.038	1.4637	.0909	-.0005	.0038
527	3	.150	.704	62.604	.9987	.0406	-.0002	.0017
527	4	.149	.704	62.536	1.2164	.0508	-.0003	.0019
527	5	.149	.704	62.216	1.3880	.0610	.0001	.0022
527	6	.148	.702	61.650	1.4316	.0705	-.0003	.0026
527	7	.148	.703	62.091	1.4983	.0790	.0003	.0030
528	1	.149	.704	62.351	.8425	.0402	-.0022	.0019
528	2	.148	.702	61.800	.9936	.0498	-.0028	.0023
528	3	.148	.702	61.740	1.0972	.0591	-.0033	.0027
528	4	.148	.702	61.919	1.1808	.0702	-.0037	.0032
528	5	.148	.702	61.848	1.2244	.0808	-.0040	.0038
529	1	.149	.701	62.625	.7373	.0405	-.0043	.0023
529	2	.149	.700	62.315	.8594	.0501	-.0054	.0027
529	3	.149	.700	62.252	.9518	.0596	-.0061	.0031
529	4	.148	.699	61.926	1.0117	.0698	-.0072	.0037
529	5	.147	.698	61.610	1.0537	.0802	-.0081	.0044
530	1	.150	.729	65.307	.7240	.0393	-.0039	.0022
530	2	.150	.727	65.006	.8664	.0506	-.0051	.0027
530	3	.149	.728	64.943	.9664	.0602	-.0057	.0031
530	4	.149	.728	64.877	1.0235	.0707	-.0070	.0037
530	5	.150	.728	65.056	1.0639	.0801	-.0079	.0043
530	7	.149	.727	64.755	1.0751	.0894	-.0084	.0051
531	1	.150	.731	65.315	.8437	.0407	-.0021	.0020
531	3	.149	.731	65.028	.9996	.0490	-.0023	.0022
531	4	.149	.730	64.946	1.1310	.0603	-.0027	.0026
531	6	.149	.730	64.903	1.1976	.0692	-.0033	.0031
531	7	.149	.730	64.839	1.2212	.0796	-.0039	.0037
531	8	.149	.731	65.040	1.2472	.0859	-.0040	.0041
532	1	.152	.733	66.057	1.0486	.0414	.0001	.0016
532	2	.151	.732	65.532	1.2291	.0494	.0001	.0018
532	3	.150	.731	65.218	1.3754	.0597	.0003	.0021
532	4	.149	.732	64.911	1.4762	.0698	.0004	.0025
532	5	.149	.731	64.601	1.5049	.0791	.0005	.0030
533	2	.201	.655	75.255	1.1223	.0407	.0027	.0015
533	3	.201	.655	75.214	1.3519	.0505	.0024	.0017
533	4	.200	.655	74.960	1.6886	.0609	.0027	.0018
533	5	.200	.655	74.902	1.7777	.0711	.0025	.0022
533	6	.200	.656	75.081	1.7938	.0789	.0022	.0025
533	7	.201	.655	75.247	1.7956	.0902	.0023	.0030
533	8	.201	.655	75.215	1.7553	.0999	.0018	.0036

TABLE IV.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
534	1	0.200	0.655	75.052	0.8553	0.0409	-0.0010	0.0020
534	2	.201	.654	75.226	1.0532	.0511	-.0016	.0022
534	3	.177	.725	74.979	1.0205	.0465	-.0018	.0020
534	4	.200	.654	74.947	1.2294	.0689	-.0029	.0030
534	5	.200	.654	74.897	1.3308	.0798	-.0033	.0034
534	6	.201	.655	75.480	1.3789	.0898	-.0037	.0039
534	7	.201	.655	75.247	1.3448	.0984	-.0046	.0046
535	1	.200	.653	75.092	.7036	.0404	-.0046	.0023
535	2	.201	.652	75.267	.8315	.0500	-.0058	.0027
535	3	.200	.651	75.007	.9367	.0605	-.0070	.0032
535	4	.199	.651	74.759	1.0181	.0704	-.0080	.0037
535	5	.200	.651	74.715	1.0783	.0803	-.0089	.0043
535	7	.201	.652	75.260	1.0893	.1003	-.0123	.0060
535	8	.201	.653	75.312	1.0811	.0898	-.0118	.0051
536	1	.201	.728	84.227	.7252	.0409	-.0060	.0023
536	2	.201	.727	84.004	.8340	.0495	-.0069	.0027
536	3	.201	.727	84.149	.9380	.0600	-.0078	.0032
536	4	.201	.727	83.911	.9997	.0690	-.0088	.0037
536	5	.201	.728	84.041	1.0945	.0808	-.0094	.0043
536	6	.201	.727	84.000	1.1128	.0898	-.0103	.0049
536	7	.201	.728	84.133	1.1159	.0995	-.0113	.0057
537	1	.201	.730	84.225	.8753	.0411	-.0035	.0019
537	2	.201	.730	84.181	1.0711	.0510	-.0039	.0022
537	3	.201	.729	84.143	1.1951	.0605	-.0044	.0025
537	4	.201	.731	84.292	1.3216	.0702	-.0045	.0028
537	5	.201	.729	83.882	1.3579	.0795	-.0050	.0033
537	6	.201	.729	84.024	1.4036	.0899	-.0053	.0039
537	7	.200	.728	83.617	1.3832	.0969	-.0056	.0044
538	1	.202	.731	84.461	1.0606	.0408	-.0012	.0016
538	2	.201	.731	84.223	1.3784	.0503	-.0010	.0017
538	3	.201	.730	83.981	1.6073	.0602	-.0011	.0019
538	4	.201	.730	84.123	1.7300	.0705	-.0011	.0022
538	5	.200	.729	83.696	1.8101	.0806	-.0011	.0026
538	6	.200	.730	83.841	1.8165	.0905	-.0007	.0030
538	7	.201	.731	84.178	1.7763	.0988	-.0007	.0035
539	1	.200	.758	87.036	1.0765	.0403	-.0007	.0015
539	2	.201	.759	87.163	1.3490	.0489	-.0006	.0016
539	3	.200	.759	86.921	1.6289	.0602	-.0005	.0018
539	4	.200	.759	86.864	1.8096	.0707	-.0002	.0021
539	5	.201	.759	87.183	1.8658	.0813	-.0002	.0025
539	6	.200	.759	86.962	1.8492	.0898	-.0003	.0029
539	7	.200	.758	87.107	1.7777	.0991	.0000	.0035
540	1	.201	.758	87.218	.8302	.0396	-.0027	.0019
540	2	.201	.758	87.345	1.0420	.0500	-.0030	.0022
540	3	.200	.758	86.922	1.1859	.0608	-.0035	.0026
540	4	.200	.757	86.885	1.3270	.0713	-.0036	.0029
540	5	.201	.758	87.216	1.3630	.0795	-.0043	.0033

Table IV.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
540	6	0.200	0.758	86.986	1.3503	0.0892	-0.0048	0.0040
540	7	.200	.758	87.122	1.3572	.0990	-.0050	.0046
541	1	.201	.755	87.251	.6996	.0397	-.0045	.0023
541	2	.201	.754	87.196	.8235	.0495	-.0057	.0027
541	3	.200	.754	86.964	.9335	.0593	-.0066	.0032
541	4	.200	.754	86.740	1.0317	.0695	-.0073	.0036
541	5	.201	.755	87.246	1.0932	.0792	-.0079	.0041
541	6	.200	.754	86.832	1.1283	.0890	-.0089	.0048
541	7	.201	.754	87.147	1.1123	.0989	-.0098	.0057

TABLE V.- UH-60 ROTOR WITH PARABOLIC TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
700	22	-0.21	0.01	0.00	-0.02	-1.33	-0.30	0.00
700	23	-.24	.98	.00	-.02	-1.19	-.34	-.08
700	24	-.25	2.02	.00	-.02	-1.02	-.36	-.05
700	25	-.21	2.98	.00	-.02	-.86	-.34	-.12
700	26	-.17	3.96	.00	-.02	-.67	-.33	-.11
700	27	-.07	4.95	.00	-.01	-.46	-.24	-.11
700	28	-.08	5.98	.00	-.01	-.22	-.29	-.13
700	29	-.04	6.97	.00	-.02	.03	-.26	-.11
700	30	-.03	7.89	.00	-.02	.24	-.28	-.12
700	31	.08	8.85	.00	-.01	.53	-.20	-.08
700	32	.05	9.89	.00	-.01	.80	-.26	-.15
700	33	.08	10.74	.00	-.01	1.02	-.24	-.05
701	1	-.20	.06	.00	-.02	-1.40	-.30	-.07
701	2	-.16	.97	.00	-.02	-1.28	-.27	-.08
701	3	-.13	2.05	.00	-.02	-1.13	-.27	-.04
701	4	-.10	3.04	.00	-.01	-.95	-.26	-.09
701	5	-.09	4.03	.00	-.01	-.76	-.29	-.05
701	6	-.04	4.90	.00	-.01	-.58	-.25	-.09
701	7	.00	5.90	.00	-.01	-.36	-.23	-.12
701	8	.04	6.88	.00	-.01	-.12	-.22	-.09
701	9	.00	7.85	.00	-.01	.14	-.31	-.10
701	10	.10	8.84	.00	-.02	.40	-.24	-.05
701	11	.17	9.87	.00	-.01	.70	-.19	-.06
701	12	.12	10.33	.00	-.01	.80	-.29	-.14
702	1	-.20	.06	.00	-.02	-1.43	-.30	-.05
702	2	-.20	1.11	.00	-.01	-1.29	-.33	-.09
702	3	-.16	2.00	.00	-.02	-1.16	-.31	-.08
702	4	-.11	2.96	.00	-.01	-.99	-.29	-.13
702	5	-.10	4.00	.00	-.01	-.80	-.30	-.12
702	6	-.05	4.94	.00	-.01	-.62	-.27	-.10
702	7	-.05	5.91	.00	-.01	-.39	-.30	-.07
702	8	.02	6.94	.00	-.01	-.12	-.26	-.08
702	9	.08	7.87	.00	-.01	.11	-.24	-.12
702	10	.09	8.85	.00	-.02	.37	-.27	-.12
702	11	.19	9.81	.00	-.01	.64	-.20	-.10
702	12	.18	10.55	.00	-.01	.85	-.26	-.13
703	1	-.17	.05	.00	-.02	-1.45	-.29	-.06
703	2	-.16	.96	.00	-.01	-1.32	-.27	-.09
703	3	-.10	1.95	.00	-.01	-1.18	-.25	-.14
703	4	-.09	3.00	.00	-.02	-.99	-.26	-.06
703	5	-.15	3.92	.00	-.02	-.84	-.35	-.08
703	6	-.03	4.89	.00	-.01	-.65	-.25	-.10
703	7	.03	5.93	.00	-.01	-.39	-.22	-.13
703	8	-.01	6.94	.00	-.01	-.15	-.32	-.11
703	9	.08	7.91	.00	-.01	.11	-.25	-.08
703	10	.07	8.91	.00	-.01	.39	-.30	-.08
703	11	.13	9.82	.00	-.01	.63	-.27	-.07
703	12	.17	10.44	.00	-.01	.80	-.27	-.14

TABLE V.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
704	2	-6.56	7.51	-1.38	2.80	0.30	-0.42	0.09
704	3	-4.53	7.12	-1.58	2.91	.30	-.42	.12
705	1	-6.34	7.17	-1.04	2.92	-.04	-.42	.05
705	2	-4.39	6.72	-1.11	2.98	-.06	-.43	.02
705	3	-2.28	6.20	-1.32	2.98	-.11	-.42	.05
705	4	-.28	5.77	-1.37	3.00	-.08	-.40	.01
705	5	1.64	5.18	-1.56	2.85	-.12	-.45	.06
705	6	3.82	4.62	-1.69	2.79	-.10	-.40	.09
705	7	5.75	4.18	-1.62	2.57	-.07	-.46	.01
705	8	7.83	3.50	-1.74	2.24	-.10	-.49	.08
705	9	9.91	3.09	-1.81	2.10	-.09	-.45	.08
706	1	9.74	4.05	-2.19	2.45	-.09	-.49	.07
706	2	7.73	4.59	-2.24	2.75	-.05	-.42	.11
706	3	5.69	5.01	-2.12	2.91	-.03	-.42	.07
706	4	3.61	5.39	-2.12	2.91	-.04	-.46	.13
707	2	-4.15	6.55	-.89	3.11	-.03	-.38	.14
707	3	-2.12	5.87	-1.15	3.13	-.01	-.31	.21
707	4	-.12	5.35	-1.16	3.01	.02	-.35	.11
707	5	1.94	4.79	-1.20	2.95	.03	-.31	.08
707	6	3.91	4.07	-1.40	2.68	.02	-.30	.16
707	7	6.02	3.38	-1.56	2.37	.02	-.30	.19
707	8	8.02	2.82	-1.48	2.16	-.06	-.36	.17
708	1	8.13	2.27	-1.06	2.16	-.08	-.35	.09
708	2	5.97	2.86	-1.04	2.19	.04	-.43	.08
708	3	4.05	3.62	-1.06	2.49	.12	-.39	.14
708	4	1.99	4.17	-.98	2.60	.08	-.40	.13
708	5	-.08	4.98	-.78	2.89	.11	-.41	.09
708	6	-2.11	5.72	-.66	3.04	.13	-.43	.11
708	7	-4.09	6.32	-.60	3.13	.11	-.39	.15
709	1	-.07	4.99	-.67	3.04	.16	-.40	.16
709	2	3.03	3.83	-.80	2.71	-.03	-.36	.17
709	3	6.11	2.85	-.80	2.50	.07	-.34	.14
710	1	6.23	2.60	-.95	2.28	.00	-.33	.16
710	2	3.05	3.62	-.83	2.45	-.01	-.41	.13
710	3	-.01	4.89	-.69	2.96	-.05	-.35	.12
711	2	-.38	5.76	-1.28	3.17	-.31	-.38	.15
711	3	2.70	5.01	-1.34	3.10	-.20	-.35	.05
711	4	5.68	4.18	-1.57	2.78	-.26	-.41	.16
712	1	5.73	1.85	-1.57	1.89	-.95	-.36	.20
712	2	2.73	2.60	-1.37	2.15	-.87	-.34	.14
712	3	-.35	3.35	-1.31	2.24	-.86	-.40	.19
713	1	-.27	3.51	-1.31	2.24	-.95	-.37	.14
713	2	2.78	2.60	-1.49	1.98	-.92	-.37	.16
713	3	5.88	1.83	-1.50	1.98	-.96	-.24	.11
714	1	5.79	3.95	-1.53	2.58	-.33	-.39	.14
714	2	2.82	4.73	-1.38	2.92	-.29	-.35	.10
715	1	-.15	3.41	-1.44	2.06	-.98	-.39	.12



TABLE V.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
715	2	2.92	2.58	-1.54	1.93	-0.93	-0.34	0.11
715	3	5.88	1.76	-1.68	1.74	-.93	-.29	.13
716	1	5.87	3.97	-1.72	2.50	-.41	-.34	.11
716	2	2.89	4.69	-1.57	2.71	-.23	-.40	.12
716	3	-.17	5.46	-1.45	2.87	-.26	-.38	.14
717	1	-.09	5.05	-.51	3.31	-.20	-.31	.11
717	2	2.94	3.94	-.72	2.96	-.19	-.31	.15
717	3	5.91	2.98	-.85	2.64	-.18	-.39	.22
718	1	5.85	1.97	-1.80	1.75	-.84	-.38	.14
718	2	5.87	3.00	-1.70	2.15	-.55	-.36	.06
718	3	5.85	4.17	-1.85	2.62	-.24	-.38	.13
718	4	5.85	5.56	-1.85	3.30	.13	-.38	.11
719	1	-4.11	6.41	-.67	3.07	-.29	-.39	.07
719	2	-2.08	5.87	-.72	3.11	-.29	-.36	.03
719	3	-.03	5.21	-1.07	2.98	-.29	-.36	.17
719	4	1.94	4.48	-1.15	2.71	-.29	-.39	.17
719	5	4.09	3.86	-1.20	2.65	-.27	-.26	.13
719	6	6.08	3.17	-1.30	2.35	-.44	-.32	.15
719	7	8.17	2.64	-1.30	2.35	-.31	-.26	.17
720	2	-.10	5.25	-.98	2.95	-.87	-.42	.13
720	3	3.02	4.25	-1.17	2.69	-.81	-.35	.16
720	4	8.04	2.60	-1.32	2.17	-.83	-.37	.16
720	5	5.99	3.18	-1.29	2.22	-.79	-.42	.15
720	6	4.07	3.75	-1.16	2.48	-.79	-.35	.10
720	7	1.95	4.51	-1.07	2.73	-.79	-.38	.12
720	8	-.01	5.24	-1.01	3.02	-.76	-.33	.14
720	9	-2.07	5.91	-.86	3.16	-.75	-.36	.14
720	10	-4.09	6.43	-.73	3.15	-.76	-.38	.14
721	1	-4.19	6.63	-.97	3.10	-.79	-.35	.08
721	2	-2.19	6.07	-1.26	3.07	-.79	-.37	.16
721	3	-.15	5.43	-1.33	2.97	-.84	-.39	.13
721	4	1.97	4.92	-1.39	2.96	-.82	-.30	.09
721	5	3.95	4.39	-1.55	2.74	-.82	-.33	.14
721	6	6.01	3.65	-1.56	2.48	-.85	-.31	.12
721	7	8.05	3.21	-1.71	2.28	-.80	-.33	.16
722	1	7.91	4.01	-1.77	2.68	-.92	-.34	-.01
722	2	5.78	4.49	-1.97	2.68	-.86	-.41	.11
722	3	3.80	5.01	-1.96	2.86	-.80	-.38	.17
722	4	1.84	5.49	-1.76	3.14	-.76	-.26	.10
722	5	-.28	5.97	-1.71	3.08	-.72	-.35	.15
723	1	-6.25	2.53	-1.06	1.55	-1.93	-.34	.19
723	2	-6.34	3.56	-.86	1.83	-1.65	-.42	.14
723	3	-6.35	4.53	-.91	2.14	-1.38	-.43	.17
723	4	-6.39	5.49	-.90	2.48	-1.10	-.44	.12
723	5	-6.30	6.57	-.78	3.02	-.82	-.33	.04
723	6	-6.34	7.55	-.92	3.31	-.53	-.39	.15
723	7	-6.36	8.62	-.93	3.73	-.24	-.38	.11

TABLE V.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
724	1	-3.27	1.92	-1.23	1.52	-1.88	-0.38	0.20
724	2	-3.27	2.84	-.96	1.89	-1.64	-.38	.10
724	3	-3.36	3.87	-.96	2.14	-1.34	-.46	.11
724	4	-3.31	4.80	-.94	2.60	-1.08	-.38	.08
724	5	-3.36	5.87	-.91	2.95	-.79	-.43	.07
724	6	-3.33	6.90	-1.03	3.46	-.50	-.36	.13
724	7	-3.28	7.97	-1.12	3.89	-.23	-.32	.15
725	1	-.28	1.09	-1.40	1.40	-1.88	-.40	.22
725	2	-.24	2.12	-1.16	1.85	-1.63	-.35	.11
725	3	-.21	3.18	-1.10	2.36	-1.32	-.28	.06
725	4	-.27	4.07	-1.05	2.61	-1.07	-.34	.02
725	5	-.23	5.14	-1.06	3.10	-.78	-.30	.05
725	6	-.31	6.09	-1.16	3.30	-.49	-.40	.09
725	7	-.25	7.22	-1.15	3.85	-.20	-.32	.02
726	2	-.14	1.40	-1.22	1.54	-.43	-.29	.05
726	3	-.38	3.11	-1.40	1.79	.07	-.57	.16
726	4	-.45	4.02	-1.72	2.04	.32	-.67	.36
726	5	-.26	5.16	-1.36	2.80	.63	-.43	.16
727	1	-3.19	1.96	-1.14	1.53	-.49	-.32	.06
727	2	-3.36	2.95	-1.25	1.61	-.22	-.51	.16
727	3	-3.55	3.86	-1.25	1.61	.07	-.74	.20
727	4	-3.29	4.72	-1.21	2.36	.27	-.42	.16
727	5	-3.33	5.86	-1.30	2.77	.59	-.46	.22
728	1	-6.25	2.65	-.94	1.45	-.49	-.38	.05
728	2	-6.42	3.50	-.94	1.45	-.26	-.56	.09
728	3	-6.32	4.42	-1.09	1.99	-.03	-.40	.19
728	4	-6.30	5.53	-1.04	2.40	.31	-.40	.17
728	5	-6.29	6.44	-.93	2.76	.56	-.39	.10
728	6	-6.31	7.52	-1.01	3.11	.86	-.42	.14
729	1	-6.26	2.66	-1.16	1.23	-.52	-.45	.12
729	2	-6.25	3.53	-1.18	1.58	-.29	-.43	.19
729	3	-6.28	4.46	-1.06	1.91	-.03	-.44	.12
729	4	-6.31	5.51	-1.05	2.21	.29	-.50	.12
729	5	-6.28	6.42	-1.05	2.69	.53	-.44	.15
729	6	-6.26	7.45	-.94	3.08	.82	-.41	.10
730	1	-3.36	1.90	-1.36	1.12	-.51	-.53	.12
730	2	-3.39	2.84	-1.56	1.40	-.25	-.57	.27
730	3	-3.22	3.80	-1.34	2.05	-.02	-.35	.18
730	4	-3.20	4.79	-1.29	2.45	.26	-.34	.14
730	5	-3.26	5.65	-1.33	2.75	.51	-.41	.20
730	6	-3.23	6.31	-1.11	3.06	.68	-.37	.09
731	1	-.38	1.19	-1.45	1.07	-.54	-.51	.11
731	2	-.27	2.10	-1.58	1.57	-.30	-.38	.15
731	3	-.31	3.00	-1.55	1.89	-.04	-.42	.19
731	4	-.26	3.97	-1.48	2.36	.23	-.36	.14
731	5	-.37	4.96	-1.51	2.55	.52	-.50	.17
731	6	-.25	5.82	-1.65	3.07	.76	-.37	.23

Table V.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
732	1	-0.02	1.05	-1.07	1.32	-0.56	-0.23	0.11
732	2	-.14	1.73	-1.02	1.38	-.33	-.39	.12
732	3	-.16	2.58	-.98	1.69	-.07	-.45	.17
732	4	-.11	3.46	-.85	2.19	.19	-.39	.12
732	5	-.08	4.24	-.83	2.59	.42	-.38	.17
732	6	-.06	5.30	-.70	3.13	.76	-.38	.14
733	1	-3.11	1.84	-.85	1.15	-.60	-.41	.08
733	2	-3.10	2.61	-.91	1.44	-.39	-.43	.15
733	3	-2.96	3.53	-.74	2.08	-.13	-.28	.13
733	4	-3.12	4.45	-.76	2.23	.18	-.50	.19
733	5	-2.99	5.40	-.53	2.96	.45	-.34	.12
733	6	-3.03	6.31	-.42	3.30	.71	-.41	.12
734	1	-6.23	2.72	-.81	1.02	-.65	-.53	.14
734	2	-6.06	3.58	-.71	1.60	-.41	-.35	.16
734	3	-6.11	4.59	-.57	2.02	-.11	-.40	.18
734	4	-6.07	5.45	-.41	2.43	.15	-.40	.13
734	5	-6.09	6.47	-.33	2.88	.46	-.43	.14
734	6	-6.11	7.31	-.18	3.26	.72	-.47	.08
735	1	-6.15	2.81	-.41	1.38	-.60	-.38	.02
735	2	-6.27	3.51	-.57	1.42	-.37	-.54	.13
735	3	-6.31	4.49	-.46	1.78	-.05	-.63	.16
735	4	-6.40	5.31	-.38	2.05	.18	-.73	.15
735	5	-6.15	6.37	-.22	2.94	.44	-.44	.12
735	6	-6.28	7.30	-.16	3.19	.72	-.58	.11
736	1	-3.37	1.74	-.91	.95	-.55	-.61	.16
736	2	-3.20	2.57	-.80	1.47	-.34	-.48	.18
736	3	-3.11	3.55	-.63	2.04	-.06	-.39	.14
736	4	-3.19	4.44	-.56	2.34	.21	-.49	.13
736	5	-3.09	5.52	-.49	3.04	.52	-.39	.15
736	6	-3.21	6.44	-.33	3.25	.82	-.56	.11
737	1	-.14	.84	-.96	1.03	-.54	-.43	.11
737	2	-.02	1.67	-.87	1.58	-.34	-.30	.12
737	3	-.11	2.60	-.68	1.84	-.02	-.42	.05
737	4	-.04	3.51	-.72	2.33	.24	-.37	.11
737	5	-.20	4.45	-.57	2.54	.56	-.58	.12
737	6	-.05	5.34	-.66	3.20	.81	-.41	.19
738	1	-.02	1.01	-.68	1.60	-.45	-.22	.11
738	2	-.08	1.68	-.54	1.79	-.27	-.29	.08
738	3	-.28	2.61	-.55	1.96	.04	-.51	.15
738	4	-.35	3.61	-.56	2.25	.36	-.60	.17
738	5	-.24	4.42	-.48	2.79	.59	-.49	.14
738	6	-.29	5.40	-.49	3.14	.87	-.57	.16
739	1	-3.28	1.74	-.48	1.34	-.46	-.48	.13
739	2	-3.32	2.63	-.51	1.63	-.22	-.52	.17
739	3	-3.39	3.56	-.39	1.97	.07	-.61	.16
739	4	-3.38	3.56	-.39	1.97	.06	-.60	.16

TABLE V.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
739	5	-3.35	4.49	-0.32	2.44	0.33	-0.58	0.15
739	6	-3.26	5.61	-.28	3.12	.64	-.48	.14
739	7	-3.24	6.56	-.21	3.57	.90	-.45	.10
739	8	-3.24	7.51	-.24	4.05	1.17	-.47	.16
740	1	-6.15	2.62	-.15	1.59	-.51	-.32	.02
740	2	-6.32	3.56	-.23	1.84	-.23	-.46	.13
740	3	-6.22	4.49	-.28	2.32	.05	-.40	.19
740	4	-6.27	5.53	-.03	2.68	.35	-.46	.05
740	5	-6.31	6.46	-.16	3.05	.63	-.52	.17
740	6	-6.29	7.48	-.05	3.53	.89	-.50	.12
740	7	-6.19	8.51	.03	4.22	1.17	-.38	.05

TABLE V.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
700	22	0.000	0.546	0.000	0.1651	0.0113	-0.0001	0.0015
700	23	.000	.546	.000	.2586	.0167	-.0002	.0017
700	24	.000	.545	.000	.3571	.0229	-.0002	.0020
700	25	.000	.545	.000	.4443	.0291	-.0003	.0023
700	26	.000	.545	.000	.5297	.0369	-.0003	.0027
700	27	.000	.546	.000	.5966	.0449	-.0003	.0032
700	28	.000	.546	.000	.6525	.0539	-.0003	.0039
700	29	.000	.546	.000	.6909	.0630	-.0002	.0046
700	30	.000	.546	.000	.7098	.0712	-.0001	.0054
700	31	.000	.545	.000	.7317	.0813	-.0001	.0064
700	32	.000	.546	.000	.7517	.0913	-.0001	.0074
701	1	.000	.546	.000	.7480	.0987	.0000	.0084
701	2	.000	.610	.000	.1547	.0107	-.0011	.0014
701	3	.000	.610	.000	.2385	.0153	-.0011	.0016
701	4	.000	.610	.000	.3472	.0218	-.0011	.0019
701	5	.000	.610	.000	.4429	.0285	-.0011	.0022
701	6	.000	.610	.000	.5264	.0359	-.0010	.0026
701	7	.000	.610	.000	.5945	.0432	-.0010	.0030
701	8	.000	.610	.000	.6493	.0514	-.0009	.0036
701	9	.000	.610	.000	.6850	.0605	-.0008	.0044
701	10	.000	.609	.000	.7181	.0698	-.0005	.0052
701	11	.000	.609	.000	.7302	.0794	-.0005	.0062
701	12	.000	.610	.000	.7493	.0902	-.0004	.0073
702	1	.000	.610	.000	.7534	.0941	-.0001	.0077
702	2	.000	.628	.000	.1484	.0103	-.0013	.0014
702	3	.000	.628	.000	.2436	.0158	-.0013	.0016
702	4	.000	.628	.000	.3373	.0212	-.0013	.0018
702	5	.000	.627	.000	.4311	.0277	-.0012	.0022
702	6	.000	.627	.000	.5170	.0351	-.0012	.0026
702	7	.000	.627	.000	.5874	.0427	-.0011	.0030
702	8	.000	.627	.000	.6452	.0509	-.0009	.0036
702	9	.000	.627	.000	.6891	.0606	-.0009	.0044
702	10	.000	.627	.000	.7129	.0697	-.0008	.0052
702	11	.000	.626	.000	.7343	.0793	-.0005	.0061
702	12	.000	.628	.000	.7510	.0891	-.0005	.0072
703	1	.000	.627	.000	.7616	.0968	-.0003	.0080
703	2	.000	.634	.000	.1485	.0103	.0015	.0014
703	3	.000	.635	.000	.2371	.0154	-.0015	.0016
703	4	.000	.634	.000	.3323	.0210	-.0015	.0018
703	5	.000	.635	.000	.4409	.0281	-.0015	.0022
703	6	.000	.634	.000	.5094	.0342	-.0014	.0025
703	7	.000	.634	.000	.5848	.0421	-.0014	.0030
703	8	.000	.635	.000	.6544	.0516	-.0013	.0036
703	9	.000	.634	.000	.6895	.0606	-.0011	.0044
703	10	.000	.634	.000	.7211	.0702	-.0011	.0052
703	11	.000	.634	.000	.7402	.0800	-.0008	.0062
					.7558	.0892	-.0008	.0071

TABLE V.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
703	12	0.000	0.634	0.000	0.7607	0.0953	-0.0007	0.0078
704	2	.116	.696	49.955	.9916	.0855	-.0067	.0051
704	3	.118	.700	50.549	1.0692	.0858	-.0048	.0048
705	1	.139	.712	59.892	1.0676	.0860	-.0076	.0048
705	2	.139	.714	59.895	1.1531	.0857	-.0046	.0044
705	3	.139	.715	59.877	1.2918	.0857	-.0015	.0039
705	4	.139	.716	59.870	1.4492	.0865	.0014	.0035
705	5	.139	.714	59.877	1.6693	.0858	.0044	.0030
705	6	.139	.713	59.864	1.9850	.0853	.0075	.0025
705	7	.139	.711	59.850	2.3634	.0860	.0108	.0022
705	8	.139	.708	59.849	3.0086	.0842	.0139	.0017
705	9	.139	.704	59.843	3.7954	.0845	.0170	.0013
706	1	.116	.690	49.845	2.2794	.0836	.0161	.0022
706	2	.117	.694	50.160	1.9783	.0853	.0129	.0026
706	3	.116	.697	49.866	1.7289	.0852	.0095	.0029
706	4	.117	.699	50.189	1.5663	.0857	.0066	.0032
707	2	.164	.728	70.377	1.2399	.0860	-.0029	.0041
707	3	.164	.729	70.388	1.4035	.0847	-.0016	.0035
707	4	.163	.729	70.156	1.6592	.0863	.0008	.0031
707	5	.162	.729	69.925	1.9857	.0865	.0027	.0026
707	6	.164	.727	70.374	2.5462	.0861	.0060	.0020
707	7	.163	.725	70.363	3.4633	.0854	.0094	.0015
707	8	.163	.721	70.150	5.0348	.0850	.0129	.0010
708	1	.187	.735	80.464	9.1606	.0841	.0133	.0005
708	2	.186	.739	80.260	4.9328	.0848	.0103	.0010
708	3	.187	.741	80.473	3.3602	.0862	.0073	.0015
708	4	.188	.743	80.866	2.4429	.0850	.0041	.0020
708	5	.188	.743	80.671	1.8958	.0857	.0009	.0027
708	6	.187	.743	80.478	1.5265	.0863	-.0020	.0034
708	7	.187	.742	80.484	1.3110	.0855	-.0050	.0039
709	1	.199	.701	79.935	2.0004	.0872	.0009	.0026
709	2	.199	.700	80.142	2.9725	.0859	.0055	.0017
709	3	.200	.697	80.333	6.0207	.0864	.0103	.0009
710	1	.202	.756	87.838	7.0238	.0856	.0109	.0007
710	2	.203	.758	88.026	3.2699	.0856	.0061	.0016
710	3	.201	.761	87.658	1.9862	.0864	.0011	.0026
711	2	.148	.617	54.639	1.4691	.0860	.0019	.0035
711	3	.148	.616	54.335	1.8535	.0864	.0045	.0028
711	4	.148	.613	54.332	2.4924	.0862	.0082	.0021
712	1	.150	.615	55.318	2.7179	.0643	.0049	.0012
712	2	.150	.617	55.304	1.9309	.0637	.0013	.0017
712	3	.151	.618	55.604	1.4561	.0632	-.0021	.0022
713	1	.151	.674	60.414	1.4660	.0643	-.0013	.0022
713	2	.150	.673	60.405	1.9606	.0640	.0022	.0017
713	3	.150	.670	60.137	2.5941	.0636	.0055	.0013
714	1	.151	.671	60.764	2.6635	.0856	.0084	.0019
714	2	.152	.674	61.026	2.0241	.0862	.0036	.0025

TABLE V.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
715	1	0.150	0.730	65.328	1.5263	0.0644	-0.0002	0.0022
715	2	.150	.729	65.318	1.9715	.0638	.0031	.0017
715	3	.150	.726	65.321	2.6909	.0635	.0065	.0012
716	1	.148	.725	64.419	2.6583	.0865	.0094	.0019
716	2	.150	.729	65.404	2.0682	.0865	.0049	.0025
716	3	.151	.731	65.642	1.5884	.0858	.0003	.0032
717	1	.204	.645	74.777	1.8964	.0858	-.0001	.0027
717	2	.202	.644	74.133	2.9063	.0863	.0047	.0018
717	3	.200	.641	73.693	5.6828	.0862	.0096	.0009
718	1	.141	.713	60.810	2.5555	.0637	.0067	.0013
718	2	.141	.713	60.473	2.5786	.0743	.0078	.0016
718	3	.140	.711	60.122	2.3959	.0856	.0091	.0021
718	4	.138	.711	59.231	2.0975	.0980	.0103	.0030
719	1	.175	.736	75.248	1.2787	.0856	-.0051	.0040
719	2	.174	.737	74.824	1.4569	.0859	-.0023	.0035
719	3	.175	.737	75.225	1.7981	.0866	.0009	.0029
719	4	.174	.738	75.014	2.2476	.0861	.0040	.0023
719	5	.174	.735	74.997	2.9121	.0862	.0070	.0018
719	6	.176	.735	75.618	4.2342	.0856	.0104	.0012
719	7	.176	.731	75.819	6.7803	.0856	.0134	.0008
720	2	.175	.741	75.246	1.7514	.0863	.0043	.0029
720	3	.175	.740	75.243	2.4934	.0862	.0093	.0021
720	4	.176	.733	75.450	6.5254	.0845	.0174	.0008
720	5	.175	.737	75.235	4.1659	.0850	.0142	.0012
720	6	.174	.739	75.032	2.9122	.0848	.0105	.0017
720	7	.175	.740	75.240	2.1758	.0855	.0070	.0023
720	8	.176	.741	75.446	1.7595	.0867	.0034	.0029
720	9	.176	.741	75.448	1.4785	.0867	-.0003	.0035
720	10	.176	.740	75.665	1.2755	.0858	-.0041	.0040
721	1	.152	.726	65.498	1.2067	.0864	-.0052	.0043
721	2	.152	.728	65.479	1.3871	.0863	-.0019	.0037
721	3	.152	.727	65.245	1.6067	.0857	.0013	.0032
721	4	.152	.727	65.241	1.8563	.0856	.0043	.0027
721	5	.151	.726	64.986	2.2711	.0857	.0077	.0022
721	6	.152	.723	65.232	2.9054	.0842	.0109	.0017
721	7	.152	.720	65.217	3.9481	.0854	.0145	.0013
722	1	.129	.706	55.439	2.4502	.0843	.0136	.0021
722	2	.130	.709	55.711	2.1126	.0850	.0107	.0024
722	3	.130	.712	55.708	1.8239	.0858	.0077	.0028
722	4	.130	.715	55.985	1.5752	.0858	.0043	.0032
722	5	.130	.715	55.990	1.4066	.0861	.0017	.0036
723	1	.151	.631	56.697	.7420	.0389	-.0026	.0021
723	2	.150	.631	56.366	.8925	.0496	-.0036	.0025
723	3	.151	.631	56.585	.9877	.0593	-.0044	.0030
723	4	.150	.629	55.976	1.0414	.0691	-.0054	.0035
723	5	.149	.629	55.645	1.0579	.0793	-.0066	.0043
723	6	.152	.630	56.684	1.0871	.0889	-.0072	.0049

TABLE V.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
723	7	0.151	0.631	56.626	1.0813	0.0992	-0.0084	0.0059
724	1	.150	.634	56.413	.9117	.0405	-.0005	.0018
724	2	.150	.633	56.080	1.0556	.0497	-.0010	.0021
724	3	.150	.633	56.015	1.1842	.0602	-.0013	.0025
724	4	.150	.633	56.241	1.2418	.0696	-.0018	.0030
724	5	.151	.633	56.452	1.2559	.0797	-.0022	.0036
724	6	.150	.631	56.126	1.2661	.0899	-.0028	.0043
724	7	.150	.630	55.790	1.2353	.0998	-.0034	.0052
725	1	.153	.636	57.222	1.0940	.0400	.0017	.0015
725	2	.153	.635	57.166	1.3044	.0501	.0016	.0017
725	3	.150	.634	56.283	1.4504	.0607	.0015	.0021
725	4	.149	.634	55.953	1.5166	.0700	.0017	.0025
725	5	.149	.633	55.897	1.5171	.0799	.0016	.0030
725	6	.151	.634	56.653	1.5461	.0902	.0020	.0035
725	7	.150	.635	56.324	1.4712	.1003	.0018	.0044
726	2	.149	.703	62.201	1.0106	.0412	.0024	.0017
726	3	.148	.702	61.825	1.4116	.0606	.0032	.0021
726	4	.147	.701	61.255	1.5580	.0707	.0037	.0024
726	5	.148	.700	61.700	1.5134	.0816	.0035	.0031
727	1	.149	.703	62.246	.8348	.0399	.0012	.0019
727	2	.150	.702	62.426	1.0411	.0509	.0011	.0022
727	3	.148	.701	61.862	1.1811	.0611	.0012	.0026
727	4	.147	.702	61.553	1.1894	.0688	.0004	.0031
727	5	.146	.701	61.218	1.2423	.0804	.0001	.0037
728	1	.149	.699	62.248	.7311	.0403	-.0007	.0022
728	2	.149	.699	62.202	.8552	.0493	-.0012	.0026
728	3	.149	.699	62.144	.9446	.0584	-.0023	.0030
728	4	.148	.698	61.820	1.0181	.0701	-.0034	.0037
728	5	.147	.697	61.247	1.0482	.0791	-.0044	.0043
728	6	.146	.698	61.189	1.0696	.0898	-.0054	.0051
729	1	.151	.728	65.468	.7242	.0399	-.0011	.0022
729	2	.150	.727	65.164	.8606	.0492	-.0020	.0026
729	3	.149	.726	64.856	.9587	.0594	-.0031	.0030
729	4	.149	.727	64.785	1.0266	.0702	-.0040	.0037
729	5	.148	.726	64.479	1.0697	.0796	-.0053	.0043
729	6	.148	.726	64.166	1.0704	.0894	-.0063	.0051
730	1	.150	.730	65.227	.8634	.0402	-.0001	.0019
730	2	.149	.730	64.910	1.0431	.0505	-.0001	.0022
730	3	.149	.730	64.603	1.1227	.0596	-.0007	.0026
730	4	.149	.729	64.535	1.1899	.0697	-.0009	.0031
730	5	.148	.729	64.229	1.2365	.0790	-.0011	.0036
730	6	.148	.729	64.198	1.2261	.0851	-.0014	.0041
731	1	.150	.732	65.230	.9675	.0395	.0030	.0016
731	2	.150	.731	65.161	1.2107	.0497	.0030	.0018
731	3	.149	.731	64.849	1.3801	.0599	.0033	.0021
731	4	.148	.730	64.298	1.4511	.0695	.0033	.0025
731	5	.147	.730	63.974	1.4914	.0797	.0039	.0030



TABLE V.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
731	6	0.147	0.729	63.915	1.4845	0.0884	0.0038	0.0036
732	1	.201	.762	87.197	1.1145	.0416	.0044	.0015
732	2	.200	.761	86.980	1.4248	.0511	.0048	.0016
732	3	.200	.761	86.744	1.6689	.0609	.0051	.0018
732	4	.199	.761	86.528	1.7967	.0701	.0051	.0021
732	5	.199	.760	86.488	1.8591	.0786	.0053	.0024
732	6	.199	.760	86.431	1.8677	.0901	.0054	.0029
733	1	.200	.761	87.079	.8354	.0400	.0027	.0019
733	2	.201	.760	87.203	1.0279	.0491	.0025	.0021
733	3	.200	.760	86.982	1.1758	.0588	.0020	.0024
733	4	.199	.760	86.564	1.3405	.0700	.0020	.0028
733	5	.199	.759	86.521	1.3639	.0794	.0012	.0033
733	6	.199	.760	86.484	1.3824	.0887	.0010	.0038
734	1	.201	.758	87.492	.6807	.0393	.0010	.0023
734	2	.201	.757	87.251	.8334	.0492	-.0001	.0026
734	3	.200	.757	87.016	.9596	.0602	-.0010	.0031
734	4	.200	.757	86.973	1.0258	.0693	-.0018	.0036
734	5	.199	.756	86.561	1.0932	.0803	-.0028	.0042
734	6	.199	.756	86.518	1.1190	.0893	-.0035	.0048
735	1	.200	.728	83.624	.6735	.0396	.0007	.0023
735	2	.199	.728	83.387	.8277	.0488	.0002	.0026
735	3	.199	.728	83.324	.9811	.0604	-.0006	.0030
735	4	.199	.728	83.282	1.0604	.0694	-.0012	.0035
735	5	.200	.728	83.419	1.0688	.0788	-.0027	.0042
735	6	.199	.727	83.175	1.1201	.0890	-.0032	.0048
736	1	.201	.731	83.789	.8627	.0404	.0030	.0019
736	2	.200	.731	83.559	1.0384	.0491	.0026	.0021
736	3	.200	.731	83.509	1.1674	.0593	.0021	.0025
736	4	.200	.731	83.454	1.3165	.0693	.0018	.0028
736	5	.199	.730	83.032	1.3561	.0804	.0011	.0034
736	6	.199	.730	83.165	1.3994	.0907	.0011	.0039
737	1	.202	.733	84.356	1.0689	.0402	.0049	.0015
737	2	.201	.732	83.931	1.3272	.0493	.0048	.0017
737	3	.201	.732	83.878	1.6255	.0608	.0051	.0019
737	4	.200	.732	83.642	1.7462	.0701	.0051	.0021
737	5	.200	.731	83.596	1.9274	.0817	.0057	.0024
737	6	.199	.731	83.172	1.8691	.0901	.0054	.0029
738	1	.201	.657	75.254	1.0805	.0422	.0046	.0016
738	2	.200	.656	75.004	1.2800	.0495	.0047	.0017
738	3	.200	.655	74.961	1.6100	.0611	.0052	.0019
738	4	.200	.656	74.695	1.8090	.0721	.0055	.0022
738	5	.200	.655	74.667	1.7996	.0798	.0054	.0025
738	6	.199	.656	74.618	1.8049	.0894	.0056	.0030
739	1	.201	.656	75.266	.8281	.0402	.0025	.0019
739	2	.200	.655	75.013	1.0242	.0496	.0022	.0022
739	3	.200	.656	74.973	1.1753	.0597	.0019	.0025
739	4	.201	.655	75.188	1.1791	.0599	.0019	.0025

TABLE V.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
739	5	0.200	0.655	74.939	1.2760	0.0696	0.0015	0.0029
739	6	.200	.654	74.907	1.3319	.0809	.0009	.0035
739	7	.199	.655	74.656	1.3252	.0892	.0004	.0041
739	8	.199	.655	74.613	1.3422	.0991	.0000	.0047
740	1	.201	.653	75.313	.6398	.0384	.0004	.0024
740	2	.201	.652	75.072	.8059	.0489	-.0004	.0027
740	3	.201	.653	75.245	.9030	.0585	-.0014	.0031
740	4	.200	.652	74.984	.9941	.0696	-.0023	.0037
740	5	.200	.652	74.946	1.0723	.0798	-.0031	.0042
740	6	.200	.653	74.913	1.0798	.0888	-.0040	.0049
740	7	.200	.652	74.876	1.0922	.0991	-.0054	.0058

TABLE VI.- S-76 ROTOR WITH STANDARD TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$h_{1s}$ , deg
80	2	-0.44	-0.04	0.01	-0.01	-1.18	-0.47	-0.16
80	3	.25	-.04	-.90	1.24	-1.24	.26	.15
80	4	.24	1.95	-.48	.94	-.84	.24	.03
80	5	.23	3.92	-.48	.94	-.37	.21	.05
80	6	.35	5.90	-.48	.94	.21	.30	.07
80	7	.44	7.88	-.45	.92	.91	.35	.13
80	8	.40	9.86	-.24	.76	1.66	.25	.04
80	9	.54	11.82	-.24	.76	2.34	.35	.18
81	1	.49	11.82	-.24	.76	2.36	.35	.10
81	2	.31	11.83	-.36	.59	2.36	.16	.16
81	3	.23	9.85	-.63	.63	1.63	.11	.17
81	4	.41	7.88	-.62	.92	.94	.34	.17
81	5	.32	5.91	-.61	.91	.31	.29	.19
81	6	.20	3.94	-.45	.79	-.26	.18	.00
81	7	.10	1.95	-.49	.82	-.75	.11	.02
81	8	.11	-.01	-.71	.98	-1.16	.13	.01
82	1	.13	-.02	-.80	1.05	-1.16	.13	.09
82	2	.22	1.97	-.60	.90	-.77	.21	.12
82	3	.25	3.93	-.60	.90	-.30	.22	.17
82	4	.29	5.91	-.60	.90	.30	.25	.21
82	5	.29	7.89	-.48	.81	.95	.19	.12
82	6	.29	9.85	-.35	.72	1.67	.15	.09
82	7	.40	11.83	-.35	.72	2.37	.22	.17
82	8	.43	11.83	-.26	.66	2.36	.25	.13
83	1	.40	11.83	-.26	.65	2.29	.19	.26
83	2	.30	9.86	-.25	.65	1.65	.11	.06
83	3	.19	7.88	-.25	.65	.90	.05	.00
83	4	.10	5.90	-.25	.65	.23	.01	.03
83	5	.22	3.93	-.55	.86	-.37	.20	.05
83	6	.13	1.95	-.52	.84	-.86	.13	.03
83	7	-.04	-.02	-.68	.95	-1.25	-.03	.07
200	2	-6.20	9.25	-1.62	3.82	1.61	.25	.14
200	3	-3.65	8.79	-1.73	4.11	1.59	.36	.13
200	4	-1.79	8.16	-1.79	4.02	1.51	.30	.14
200	5	.25	7.67	-1.81	4.02	1.48	.32	.11
200	6	2.27	7.19	-1.87	3.97	1.47	.33	.14
200	7	4.29	6.73	-1.94	3.77	1.49	.24	.16
200	8	6.29	6.18	-1.96	3.52	1.46	.23	.18
200	9	8.22	5.60	-1.93	3.26	1.45	.19	.17
200	10	10.30	5.12	-1.93	3.11	1.45	.24	.16
201	1	10.40	4.22	-1.63	2.86	1.43	.22	.17
201	4	-6.04	8.58	-1.07	3.84	2.04	.21	.05
201	5	-3.95	8.11	-1.21	3.93	1.99	.23	.08
201	6	-2.01	7.55	-1.25	3.88	1.98	.18	.09
201	7	.05	7.08	-1.25	3.88	1.99	.21	.07
201	8	1.87	6.31	-1.35	3.37	1.94	.02	.11

Table VI.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
201	9	5.94	5.28	-1.33	2.97	2.09	-0.01	0.07
201	10	5.93	5.28	-1.33	2.97	2.09	-.02	.07
201	11	8.02	4.63	-1.40	2.79	2.06	.03	.10
201	12	9.80	4.14	-1.38	2.30	2.10	-.18	.11
202	2	-6.03	8.75	-.78	4.12	1.54	.13	.06
202	3	-3.96	8.06	-.80	4.09	1.49	.10	.08
202	4	-2.00	7.50	-.83	4.05	1.48	.10	.06
202	5	.04	6.88	-.94	3.90	1.49	.12	.06
202	6	2.01	6.21	-1.00	3.50	1.50	.01	.06
202	7	3.99	5.50	-1.03	3.24	1.41	.00	.06
202	8	6.11	4.89	-1.10	3.15	1.45	.08	.08
202	9	8.06	4.29	-1.12	2.91	1.44	.04	.10
203	1	8.11	3.79	-.70	3.05	1.45	.02	.05
203	2	5.98	4.44	-.70	3.05	1.41	-.11	.09
203	3	3.99	5.14	-.54	3.27	1.39	-.11	.00
203	4	1.96	5.85	-.61	3.52	1.44	-.07	.06
203	5	-.02	6.71	-.56	3.90	1.53	-.05	.09
203	6	-2.09	7.40	-.44	4.06	1.51	-.06	.08
203	7	-4.03	8.06	-.29	4.26	1.48	-.01	-.02
204	2	-.08	7.58	-1.06	4.09	1.55	.12	.08
204	3	2.96	6.65	-1.03	3.86	1.46	.13	.06
204	4	5.77	5.72	-1.11	3.26	1.54	-.04	.10
205	1	5.73	3.20	-.93	2.23	.58	-.09	.09
205	2	2.84	4.09	-.85	2.69	.58	.05	.05
205	3	-.23	5.06	-.72	2.88	.63	-.04	.03
206	1	-.07	7.24	-.06	4.42	1.47	-.03	-.01
206	2	2.94	6.03	-.31	4.09	1.44	.03	.08
206	3	5.95	4.90	-.23	3.64	1.45	-.08	.03
207	1	5.81	5.37	-1.06	2.99	1.44	-.11	.06
207	2	2.86	6.36	-1.12	3.49	1.47	-.01	.11
207	3	-.17	7.21	-.97	3.70	1.45	-.03	.05
208	2	-.02	4.79	-1.00	2.93	1.18	.06	.11
208	3	2.93	3.76	-1.10	2.51	1.14	-.04	.13
208	4	6.03	2.93	-1.05	2.31	1.15	-.02	.07
209	1	6.16	4.52	-.52	3.50	2.03	-.05	.08
209	2	3.05	5.53	-.53	3.81	2.00	-.05	.15
209	3	.06	6.74	-.32	4.22	2.00	.00	.06
210	1	-.08	6.72	-1.21	3.50	1.96	-.04	.12
210	2	3.01	5.75	-1.35	3.17	1.94	-.02	.15
210	3	6.05	4.78	-1.29	2.74	1.95	-.07	.10
211	1	6.10	2.67	-1.10	2.06	1.07	-.01	.08
211	2	2.91	3.51	-1.07	2.19	1.09	-.09	.11
211	3	.04	4.31	-1.08	2.49	1.05	.00	.16
212	1	.18	6.44	-.23	3.99	1.95	-.03	.04
212	2	3.10	5.14	-.36	3.53	1.85	-.06	.02
212	3	6.15	4.07	-.61	3.22	1.91	-.08	.14

TABLE VI.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
213	1	5.92	2.57	-1.16	2.01	0.93	-0.09	0.09
213	2	5.94	3.92	-1.25	2.50	1.48	-.07	.07
213	3	6.00	5.18	-1.41	3.12	1.96	.00	.11
213	4	5.97	6.55	-1.50	3.64	2.45	-.02	.12
214	2	-.03	3.24	-.34	2.52	.58	-.05	.14
214	3	.09	4.24	-.24	3.14	.94	.07	.07
214	4	.02	5.20	-.35	3.50	1.30	.00	.12
214	5	.03	6.18	-.34	3.96	1.67	.00	.11
214	6	.09	7.16	-.37	4.63	2.02	.07	.14
214	7	.11	8.16	-.24	5.21	2.35	.09	.02
215	1	-2.96	3.45	-.11	2.45	.28	.06	.06
215	2	-2.99	4.43	-.14	2.87	.64	.02	.08
215	3	-3.06	5.41	-.26	3.30	1.04	-.05	.16
215	4	-2.92	6.42	-.15	3.99	1.37	.11	.04
215	5	-2.98	7.42	-.27	4.37	1.75	.03	.12
215	6	-3.07	8.33	-.24	4.75	2.08	-.06	.09
215	7	-3.04	8.90	-.31	5.12	2.24	-.03	.12
216	1	-5.89	4.33	-.08	2.52	.23	.08	.09
216	2	-5.91	5.31	-.17	2.95	.60	.06	.16
216	3	-5.92	6.30	-.06	3.55	.96	.08	.08
216	4	-6.01	7.29	-.14	3.85	1.34	-.03	.12
216	5	-6.00	8.26	-.17	4.31	1.70	-.03	.10
216	6	-6.03	9.25	-.14	4.85	2.08	-.04	.09
216	7	-6.07	9.47	-.14	4.84	2.17	-.11	.06
217	1	-5.98	4.06	-.22	2.03	.14	-.04	.10
217	2	-6.00	5.05	-.25	2.46	.54	-.08	.16
217	3	-6.05	6.01	-.19	2.92	.95	-.14	.10
217	4	-5.98	7.00	-.19	3.48	1.31	-.06	.08
217	5	-5.84	7.99	-.39	4.17	1.66	.08	.17
217	6	-5.91	8.95	-.27	4.68	2.02	-.01	.13
217	7	-5.83	9.43	-.24	5.06	2.17	.08	.11
218	1	-2.90	3.06	-.18	2.04	.15	.03	.02
218	2	-3.02	4.05	-.21	2.39	.57	-.10	.08
218	3	-2.96	5.02	-.12	2.96	.90	-.04	.01
218	4	-3.01	6.02	-.16	3.38	1.30	-.11	.02
218	5	-2.99	6.96	-.21	3.86	1.66	-.10	.05
218	6	-2.95	7.97	-.31	4.53	2.00	-.04	.11
218	7	-2.98	8.95	-.28	5.19	2.35	-.08	.14
219	1	.08	2.15	-.41	1.82	.16	.01	.06
219	2	.10	3.12	-.50	2.38	.58	.02	.16
219	3	.10	4.10	-.39	2.88	.96	.02	.10
219	4	.06	5.11	-.34	3.30	1.37	-.03	.04
219	5	.01	6.07	-.23	3.76	1.73	-.09	.02
219	6	-.03	7.07	-.17	4.24	2.12	-.15	.03

TABLE VI.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
220	1	0.12	2.04	-0.47	1.75	0.11	0.03	0.08
220	2	.07	3.03	-.41	2.23	.53	-.03	.09
220	3	.03	4.00	-.36	2.61	.95	-.09	.08
220	4	.04	4.99	-.20	3.15	1.34	-.08	-.04
220	5	.04	5.99	-.45	3.68	1.76	-.10	.15
220	6	.13	6.96	-.24	4.34	2.10	-.02	.05
221	1	-2.96	2.82	-.40	1.78	-.01	-.02	.09
221	2	-2.95	3.80	-.44	2.31	.37	-.02	.16
221	3	-2.96	4.79	-.25	2.81	.80	-.04	.05
221	4	-2.94	5.74	-.10	3.30	1.17	-.03	-.07
221	5	-3.10	6.78	-.20	3.63	1.65	-.21	.00
221	6	-3.02	7.76	-.18	4.37	1.99	-.12	.06
222	1	-5.99	3.96	-.33	1.99	-.03	-.03	.11
222	2	-5.90	4.96	-.02	2.67	.41	.07	-.02
222	3	-6.03	5.96	.02	2.96	.85	-.08	-.07
222	4	-6.00	6.96	-.32	3.51	1.24	-.04	.10
222	5	-6.05	7.93	-.26	3.99	1.64	-.13	.07
222	6	-5.97	8.90	-.23	4.68	1.99	-.05	.09
222	7	-5.90	9.43	-.13	5.07	2.12	.03	.05
223	2	-5.73	5.06	.42	3.14	.08	.21	.13
223	3	-5.75	6.07	.51	3.74	.45	.18	.16
223	4	-5.73	7.07	.78	4.38	.79	.21	.00
223	5	-5.88	8.05	.67	4.84	1.20	.04	.15
223	6	-6.09	9.06	.79	5.21	1.58	-.20	.14
224	1	-2.70	3.67	.40	2.85	.14	.16	.11
224	2	-2.68	4.67	.61	3.47	.47	.19	.02
224	3	-2.70	5.76	.48	4.16	.88	.15	.14
224	4	-2.79	6.73	.65	4.70	1.26	.07	.11
224	5	-2.71	7.73	.62	5.43	1.60	.11	.17
224	6	-2.81	8.62	.71	5.87	1.92	.01	.14
225	1	.34	2.22	.34	2.50	.09	.26	.02
225	2	.23	3.21	.51	2.93	.49	.11	.00
225	3	.24	4.17	.46	3.61	.84	.12	.10
225	4	.20	5.16	.69	4.16	1.19	.08	.00
225	5	.15	6.17	.71	4.76	1.56	.00	.08
225	6	.19	7.15	.71	5.40	1.87	.05	.13
226	1	.41	2.03	.11	2.09	.06	.25	.09
226	2	.33	3.03	.23	2.60	.47	.16	.10
226	3	.28	4.01	.31	3.14	.87	.08	.12
226	4	.32	5.00	.50	3.80	1.24	.10	.05
226	5	.42	6.03	.70	4.63	1.58	.19	.02
226	6	.42	6.98	.90	5.28	1.90	.20	.01
226	7	.29	7.92	1.18	5.73	2.17	.05	.02
227	1	-2.75	3.20	.01	2.09	-.03	.08	.22
227	2	-2.61	4.29	.42	2.96	.41	.23	.03
227	3	-2.69	5.31	.51	3.45	.82	.11	.05
227	4	-2.75	6.27	.45	4.00	1.20	.02	.13

TABLE VI.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
227	5	-2.70	7.26	0.52	4.68	1.55	0.04	0.12
227	6	-2.69	8.25	.59	5.41	1.86	.11	.20
227	7	-2.57	9.09	.86	6.12	2.07	.20	.12
228	1	-5.60	4.85	.46	2.66	.01	.22	.02
228	2	-5.69	5.84	.66	3.20	.42	.10	.02
228	3	-5.67	6.83	.66	3.83	.80	.12	.03
228	4	-5.59	7.83	.88	4.57	1.14	.19	-.07
228	5	-5.68	8.81	.87	5.11	1.51	.08	.00
228	6	-5.45	9.73	1.18	6.02	1.74	.33	-.11
230	2	-3.83	8.00	-.70	4.26	1.88	.17	.07
230	3	-1.77	7.35	-.70	4.26	1.83	.21	.07
230	4	.20	6.69	-.83	4.07	1.86	.17	.14
230	5	2.16	6.11	-.84	3.81	1.92	.14	.08
230	6	4.58	5.28	-.97	3.58	1.87	.19	.11
230	7	6.29	4.71	-1.02	3.40	1.87	.17	.14
230	8	8.21	4.04	-.95	3.14	1.94	.11	.09
231	1	8.02	4.51	-1.24	2.98	1.94	.09	.09
231	2	6.08	5.07	-1.18	3.21	1.94	.15	.03
231	3	4.12	5.70	-1.17	3.52	2.00	.18	.04
231	4	2.03	6.27	-1.13	3.64	1.90	.13	.05
231	5	.05	6.95	-1.05	3.88	1.94	.13	.03
231	6	-1.92	7.52	-1.08	4.05	1.96	.19	.07
231	7	-3.97	8.06	-1.08	4.05	1.97	.17	.10
231	8	-6.00	8.53	-.93	3.98	1.97	.15	.05
232	1	3.43	5.54	-1.53	3.38	1.90	.22	.21
232	2	3.05	5.66	-1.21	3.30	1.94	.12	.01
232	3	6.17	4.86	-1.53	3.11	1.96	.19	.16
233	1	6.17	2.68	-1.20	2.22	1.04	.16	.08
233	2	3.15	3.54	-1.12	2.53	1.07	.21	.04
233	3	.02	4.38	-1.01	2.65	1.02	.16	.03
234	1	-.08	6.36	-.64	3.93	1.97	.13	.14
234	2	3.17	5.18	-.72	3.55	1.90	.13	.07
234	3	6.41	4.22	-.88	3.34	1.92	.20	.07
235	1	.26	2.85	-.58	2.17	.46	.16	.09
235	2	.27	3.95	-.49	2.80	.94	.19	.07
235	3	.30	4.94	-.46	3.27	1.33	.18	.07
235	4	.22	5.94	-.31	3.81	1.76	.14	.03
235	5	.25	6.21	-.29	3.98	1.89	.12	.08
236	1	-2.81	3.80	-.27	2.18	.37	.13	-.02
236	2	-2.74	4.74	-.33	2.79	.77	.16	.06
236	3	-2.77	5.73	-.42	3.26	1.21	.16	.09
236	4	-2.75	6.48	-.49	3.69	1.50	.14	.17
237	1	-5.84	4.91	-.38	2.35	.39	.15	.15
237	2	-5.99	5.91	-.33	2.90	.83	.18	.09
237	3	-5.94	6.90	-.31	3.50	1.25	.19	.09
237	4	-5.93	7.91	-.29	3.91	1.69	.10	.09
237	5	-5.79	8.89	-.06	4.64	2.04	.21	.08

TABLE VI.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
238	1	0.38	2.90	0.13	2.34	0.42	0.20	0.13
238	2	.36	3.85	.34	2.98	.76	.22	.05
238	3	.32	4.84	.41	3.50	1.18	.08	.11
238	4	.46	5.84	.58	4.19	1.53	.15	.08
238	5	.46	5.84	.61	4.24	1.54	.16	.06
238	6	.45	6.81	.91	4.90	1.88	.11	.12
239	1	-2.62	4.39	.37	2.67	.42	.13	.13
239	2	-2.59	5.34	.47	3.30	.80	.14	.09
239	3	-2.57	6.34	.63	3.99	1.19	.14	.04
239	4	-2.59	7.33	.75	4.60	1.52	.13	.06
240	1	-5.71	5.64	.66	2.79	.33	.11	.03
240	2	-5.68	6.62	.71	3.41	.72	.12	.08
240	3	-5.64	7.62	.69	4.13	1.13	.13	.11
240	4	-5.63	8.59	.90	4.82	1.47	.17	.03



TABLE VI.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
80	2	0.000	0.582	0.000	0.0375	0.0043	-0.0001	0.0014
80	3	.000	.582	.000	.0308	.0036	-.0003	.0013
80	4	.000	.582	.000	.2142	.0154	-.0006	.0017
80	5	.000	.581	.000	.4204	.0298	-.0008	.0023
80	6	.000	.582	.000	.5936	.0476	-.0009	.0033
80	7	.000	.580	.000	.7092	.0687	-.0009	.0048
80	8	.000	.582	.000	.7088	.0907	-.0007	.0072
80	9	.000	.581	.000	.7094	.1124	-.0010	.0100
81	1	.000	.499	.000	.7486	.1111	-.0009	.0093
81	2	.000	.499	.000	.7491	.1102	-.0001	.0092
81	3	.000	.499	.000	.7413	.0886	.0003	.0067
81	4	.000	.499	.000	.7186	.0693	.0000	.0048
81	5	.000	.499	.000	.6436	.0505	.0002	.0033
81	6	.000	.499	.000	.4937	.0338	.0004	.0024
81	7	.000	.499	.000	.2757	.0189	.0007	.0018
81	8	.000	.499	.000	.0760	.0070	.0007	.0014
82	1	.000	.544	.000	.0649	.0062	.0001	.0014
82	2	.000	.544	.000	.2583	.0175	-.0003	.0017
82	3	.000	.543	.000	.4762	.0318	-.0006	.0022
82	4	.000	.543	.000	.6409	.0499	-.0008	.0033
82	5	.000	.544	.000	.7154	.0693	-.0010	.0048
82	6	.000	.543	.000	.7456	.0906	-.0013	.0069
82	7	.000	.543	.000	.7351	.1121	-.0017	.0096
82	8	.000	.549	.000	.7277	.1126	-.0018	.0097
83	1	.000	.589	.000	.7118	.1138	-.0019	.0101
83	2	.000	.589	.000	.7375	.0920	-.0018	.0071
83	3	.000	.590	.000	.7106	.0701	-.0018	.0049
83	4	.000	.589	.000	.6214	.0494	-.0020	.0033
83	5	.000	.590	.000	.4737	.0319	-.0022	.0023
83	6	.000	.590	.000	.2455	.0173	-.0021	.0017
83	7	.000	.590	.000	.0537	.0054	-.0021	.0014
200	2	.125	.650	50.037	.8586	.1018	-.0108	.0072
200	3	.125	.654	50.021	.9597	.1020	-.0094	.0064
200	4	.125	.655	50.031	1.1089	.1005	-.0059	.0054
200	5	.125	.655	50.033	1.2194	.1002	-.0023	.0049
200	6	.125	.655	50.024	1.3805	.1004	.0012	.0043
200	7	.124	.653	49.687	1.5913	.1008	.0051	.0038
200	8	.124	.652	50.018	1.8193	.0998	.0088	.0033
200	9	.125	.649	50.012	2.2224	.0991	.0123	.0027
200	10	.125	.645	49.992	2.6896	.0989	.0152	.0022

TABLE VI.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
201	1	0.150	0.659	60.235	4.7902	0.0986	0.0159	0.0012
201	4	.151	.664	60.318	1.0044	.0990	-.0074	.0058
201	5	.150	.667	60.035	1.0983	.0998	-.0034	.0054
201	6	.150	.669	60.280	1.2416	.0994	.0003	.0047
201	7	.150	.668	60.013	1.3893	.0994	.0034	.0042
201	8	.149	.669	59.997	1.6747	.0983	.0067	.0035
201	9	.150	.665	60.237	2.5706	.0999	.0118	.0023
201	10	.151	.666	60.509	2.5467	.0997	.0116	.0023
201	11	.150	.663	60.238	3.3105	.0983	.0139	.0018
201	12	.150	.660	60.229	4.8797	.0992	.0169	.0012
202	2	.175	.683	70.241	1.0033	.1002	-.0085	.0060
202	3	.175	.685	70.231	1.1235	.0991	-.0046	.0052
202	4	.176	.687	70.431	1.2768	.0992	-.0014	.0046
202	5	.176	.687	70.420	1.5167	.0994	.0018	.0039
202	6	.174	.687	69.942	1.8781	.1001	.0048	.0032
202	7	.174	.685	69.936	2.3915	.0988	.0073	.0024
202	8	.175	.684	70.153	3.2312	.0988	.0096	.0018
202	9	.174	.681	69.912	4.9563	.0987	.0117	.0012
203	1	.201	.694	80.347	10.5685	.0986	.0108	.0006
203	2	.200	.698	80.142	4.8283	.0986	.0076	.0012
203	3	.200	.700	80.138	2.9946	.0986	.0039	.0019
203	4	.200	.701	80.147	2.1244	.0985	.0003	.0027
203	5	.200	.702	80.327	1.6672	.0999	-.0031	.0035
203	6	.200	.702	80.327	1.3509	.0989	-.0066	.0043
203	7	.200	.700	80.133	1.1482	.0985	-.0100	.0051
204	2	.161	.583	55.203	1.5036	.0999	.0005	.0039
204	3	.160	.582	54.911	1.9483	.0991	.0037	.0030
204	4	.159	.579	54.616	2.8563	.0996	.0079	.0021
205	1	.160	.580	55.023	3.1838	.0734	.0025	.0012
205	2	.161	.583	55.296	2.0368	.0735	-.0040	.0018
205	3	.160	.583	55.009	1.5364	.0748	-.0077	.0025
206	1	.217	.610	74.537	1.7834	.0997	-.0067	.0033
206	2	.217	.609	74.321	2.7933	.0997	-.0012	.0021
206	3	.215	.607	73.884	5.9633	.0996	.0047	.0010
207	1	.161	.632	60.307	3.0580	.0993	.0052	.0019
207	2	.161	.635	60.309	2.0795	.0999	-.0004	.0028
207	3	.162	.637	60.569	1.5509	.0994	-.0055	.0038
208	2	.161	.635	60.135	1.5652	.0745	.0037	.0024
208	3	.160	.634	59.896	2.1953	.0735	.0088	.0017
208	4	.159	.631	59.635	3.4434	.0731	.0132	.0011
209	1	.214	.659	80.068	6.6605	.0996	.0165	.0009
209	2	.214	.661	80.104	2.9612	.0997	.0096	.0020
209	3	.215	.662	80.525	1.7628	.1000	.0024	.0034
210	1	.161	.687	65.381	1.5513	.1002	.0008	.0038
210	2	.159	.685	64.660	2.0549	.0993	.0069	.0029
210	3	.160	.682	64.905	3.1309	.0987	.0131	.0019
211	1	.161	.683	65.285	3.1990	.0739	.0107	.0012

TABLE VI.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
211	2	0.160	0.686	65.040	2.1053	0.0749	0.0071	0.0018
211	3	.161	.686	65.303	1.5276	.0739	.0030	.0025
212	1	.217	.710	87.083	1.7944	.1008	.0040	.0033
212	2	.217	.709	86.929	2.7864	.0985	.0092	.0021
212	3	.216	.705	86.757	6.4251	.0991	.0149	.0009
213	1	.149	.668	59.769	2.6251	.0698	.0098	.0013
213	2	.150	.669	60.207	2.6681	.0851	.0113	.0018
213	3	.151	.669	60.391	2.5626	.0991	.0126	.0023
213	4	.149	.668	59.785	2.2726	.1131	.0139	.0032
214	2	.215	.616	75.127	1.5419	.0589	.0024	.0017
214	3	.216	.615	75.317	1.6534	.0694	.0021	.0021
214	4	.215	.615	75.075	1.7475	.0801	.0021	.0024
214	5	.216	.615	75.260	1.8064	.0909	.0021	.0028
214	6	.215	.615	75.016	1.7325	.1006	.0017	.0035
214	7	.215	.614	74.997	1.5976	.1095	.0013	.0043
215	1	.217	.615	75.635	.9603	.0496	-.0006	.0022
215	2	.216	.615	75.377	1.1085	.0606	-.0014	.0025
215	3	.216	.615	75.339	1.2414	.0722	-.0020	.0029
215	4	.216	.615	75.325	1.2313	.0817	-.0031	.0036
215	5	.216	.615	75.299	1.2845	.0925	-.0035	.0041
215	6	.215	.614	75.055	1.2903	.1020	-.0041	.0047
215	7	.216	.614	75.251	1.2477	.1068	-.0046	.0053
216	1	.217	.613	75.646	.7343	.0475	-.0040	.0027
216	2	.217	.613	75.596	.8553	.0589	-.0052	.0032
216	3	.216	.612	75.350	.9480	.0705	-.0070	.0037
216	4	.216	.612	75.321	1.0029	.0810	-.0080	.0043
216	5	.215	.612	75.077	1.0420	.0915	-.0092	.0050
216	6	.216	.612	75.264	1.0356	.1011	-.0105	.0059
216	7	.215	.612	75.269	1.0368	.1033	-.0106	.0061
217	1	.215	.683	83.944	.7593	.0470	-.0050	.0025
217	2	.215	.683	83.907	.8890	.0592	-.0063	.0031
217	3	.215	.682	83.675	.9885	.0710	-.0077	.0036
217	4	.215	.682	83.635	1.0221	.0815	-.0090	.0043
217	5	.214	.682	83.397	1.0348	.0915	-.0107	.0051
217	6	.217	.683	84.516	1.0303	.1017	-.0117	.0060
217	7	.216	.683	84.308	.9897	.1052	-.0126	.0065
218	1	.216	.687	84.127	.9440	.0477	-.0044	.0021
218	2	.215	.686	84.089	1.1541	.0604	-.0051	.0024
218	3	.215	.685	83.862	1.2288	.0706	-.0061	.0029
218	4	.216	.685	84.018	1.2977	.0820	-.0066	.0034
218	5	.215	.685	83.786	1.3155	.0924	-.0074	.0040
218	6	.214	.685	83.560	1.2650	.1019	-.0084	.0048
218	7	.216	.686	84.292	1.1849	.1110	-.0091	.0059
219	1	.215	.687	83.944	1.2766	.0491	-.0039	.0016
219	2	.215	.687	83.903	1.5781	.0613	-.0043	.0018
219	3	.214	.686	83.669	1.7294	.0726	-.0045	.0021
219	4	.214	.686	83.425	1.8476	.0849	-.0044	.0025

TABLE VI.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
219	5	0.214	0.686	83.390	1.8017	0.0948	-0.0042	0.0030
219	6	.216	.687	84.130	1.7297	.1056	-.0041	.0037
220	1	.215	.713	87.166	1.2851	.0482	-.0034	.0015
220	2	.215	.712	86.920	1.5572	.0607	-.0034	.0018
220	3	.215	.712	86.877	1.8085	.0735	-.0032	.0021
220	4	.214	.712	86.832	1.8169	.0846	-.0033	.0025
220	5	.213	.712	86.410	1.8367	.0962	-.0032	.0030
220	6	.214	.712	86.562	1.6749	.1054	-.0036	.0038
221	1	.215	.712	86.964	.9087	.0451	-.0054	.0020
221	2	.215	.712	86.916	1.1032	.0573	-.0060	.0023
221	3	.214	.711	86.685	1.2344	.0696	-.0067	.0028
221	4	.215	.712	87.011	1.2771	.0801	-.0073	.0033
221	5	.215	.712	86.963	1.3398	.0929	-.0075	.0040
221	6	.215	.712	87.114	1.2771	.1021	-.0084	.0048
222	1	.216	.710	87.541	.7197	.0448	-.0074	.0025
222	2	.216	.709	87.308	.8505	.0577	-.0090	.0031
222	3	.215	.709	87.068	.9587	.0706	-.0102	.0037
222	4	.215	.709	87.208	1.0125	.0822	-.0113	.0044
222	5	.215	.709	87.166	1.0507	.0937	-.0124	.0052
222	6	.215	.709	87.137	1.0061	.1023	-.0137	.0062
222	7	.215	.709	87.123	.9556	.1057	-.0142	.0068
223	2	.299	.652	104.497	.6112	.0463	.0017	.0030
223	3	.299	.650	104.316	.7140	.0577	.0005	.0036
223	4	.299	.650	104.313	.7675	.0673	-.0009	.0042
223	5	.299	.650	104.306	.8630	.0778	-.0150	.0048
223	6	.299	.650	104.284	.9178	.0905	-.0027	.0055
224	1	.298	.652	104.093	.8441	.0477	.0030	.0023
224	2	.298	.653	104.209	.9619	.0581	.0022	.0027
224	3	.298	.652	104.031	1.0947	.0698	.0013	.0032
224	4	.297	.652	103.860	1.1746	.0802	.0007	.0036
224	5	.298	.652	103.996	1.2103	.0899	-.0002	.0042
224	6	.298	.652	104.142	1.1779	.0984	-.0008	.0049
225	1	.298	.654	104.103	1.1470	.0465	.0037	.0016
225	2	.298	.654	104.092	1.4294	.0581	.0037	.0018
225	3	.298	.653	104.081	1.6864	.0691	.0033	.0020
225	4	.298	.653	104.073	1.7777	.0790	.0032	.0023
225	5	.297	.653	103.723	1.8424	.0895	.0028	.0027
225	6	.298	.652	103.858	1.7339	.0981	.0025	.0033
226	1	.296	.726	115.273	1.2583	.0473	.0022	.0015
226	2	.295	.726	115.083	1.5727	.0589	.0022	.0017
226	3	.295	.726	114.917	1.8570	.0712	.0021	.0019
226	4	.295	.726	114.901	1.9540	.0819	.0017	.0023
226	5	.295	.726	114.871	1.8531	.0915	.0012	.0028
226	6	.295	.726	114.998	1.6935	.0997	.0008	.0035
226	7	.295	.725	114.849	1.4579	.1071	.0005	.0045
227	1	.296	.726	115.283	.8525	.0455	-.0020	.0021
227	2	.296	.725	115.273	.9882	.0567	-.0032	.0026

TABLE VI.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
227	3	0.295	0.725	115.110	1.1392	0.0690	-0.0039	0.0030
227	4	.295	.725	114.948	1.2538	.0804	-.0045	.0034
227	5	.295	.724	114.773	1.2723	.0905	-.0054	.0040
227	6	.294	.725	114.741	1.1721	.0983	-.0064	.0049
227	7	.295	.724	114.872	1.0333	.1033	-.0077	.0060
228	1	.296	.723	115.496	.6334	.0458	-.0074	.0030
228	2	.296	.722	115.177	.7576	.0585	-.0088	.0036
228	3	.295	.722	115.154	.8414	.0697	-.0100	.0042
228	4	.296	.721	115.128	.8798	.0801	-.0113	.0049
228	5	.295	.721	114.828	.8980	.0901	-.0122	.0057
228	6	.295	.721	114.813	.8240	.0956	-.0137	.0068
230	2	.187	.691	75.057	1.1489	.0993	-.0018	.0051
230	3	.187	.693	75.044	1.3321	.0988	.0018	.0044
230	4	.187	.693	75.029	1.6019	.0991	.0054	.0037
230	5	.188	.693	75.223	2.0394	.1005	.0089	.0029
230	6	.178	.723	71.132	2.5941	.0880	.0110	.0019
230	7	.187	.689	74.989	4.0247	.0982	.0153	.0015
230	8	.187	.687	74.974	7.3671	.0981	.0182	.0008
231	1	.161	.673	64.693	4.1709	.0979	.0164	.0014
231	2	.163	.676	65.161	2.9484	.0985	.0111	.0020
231	3	.163	.679	65.404	2.2926	.0996	.0069	.0026
231	4	.162	.680	65.146	1.7966	.0985	.0036	.0032
231	5	.162	.680	64.896	1.4790	.0993	.0003	.0040
231	6	.163	.680	65.375	1.2732	.0992	-.0027	.0046
231	7	.163	.679	65.376	1.1320	.0994	-.0057	.0052
231	8	.163	.677	65.373	1.0237	.0994	-.0086	.0058
232	1	.161	.727	69.067	2.0630	.0978	.0085	.0028
232	2	.161	.727	69.059	1.9886	.0982	.0083	.0029
232	3	.160	.723	68.581	2.9198	.0988	.0141	.0020
233	1	.162	.726	69.641	3.3660	.0731	.0118	.0011
233	2	.162	.728	69.408	2.1555	.0736	.0077	.0017
233	3	.161	.729	69.171	1.5153	.0734	.0038	.0025
234	1	.201	.752	86.461	1.7072	.1001	.0048	.0035
234	2	.201	.751	86.290	2.5553	.0984	.0103	.0023
234	3	.200	.747	85.729	4.8686	.0980	.0160	.0012
235	1	.218	.762	93.594	1.6295	.0582	.0059	.0016
235	2	.217	.761	93.202	1.7560	.0714	.0057	.0020
235	3	.216	.762	92.975	1.8206	.0836	.0057	.0025
235	4	.216	.760	92.768	1.7723	.0947	.0056	.0031
235	5	.216	.761	92.748	1.7540	.0982	.0057	.0033
236	1	.217	.761	93.097	1.1316	.0571	.0032	.0022
236	2	.217	.760	93.226	1.2470	.0685	.0026	.0027
236	3	.217	.760	93.184	1.3082	.0809	.0021	.0033
236	4	.216	.760	92.973	1.3368	.0899	.0017	.0038
237	1	.217	.757	93.102	.8816	.0578	.0006	.0029
237	2	.217	.757	93.227	.9735	.0707	-.0007	.0036
237	3	.217	.757	93.169	1.0151	.0828	-.0021	.0044

TABLE VI.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
237	4	0.217	0.756	92.960	1.0246	0.0940	-0.0030	0.0053
237	5	.216	.757	92.931	.9532	.1023	-.0042	.0064
238	1	.297	.763	120.539	1.9649	.0587	.0097	.0014
238	2	.298	.763	120.696	2.0564	.0691	.0096	.0017
238	3	.296	.762	119.997	2.2338	.0809	.0098	.0019
238	4	.297	.762	120.391	2.1259	.0911	.0096	.0024
238	5	.298	.762	120.540	2.0628	.0902	.0095	.0025
238	6	.297	.763	120.389	1.8356	.0993	.0093	.0032
239	1	.298	.762	120.921	1.1192	.0582	.0066	.0023
239	2	.297	.761	120.489	1.2321	.0694	.0060	.0028
239	3	.298	.761	120.750	1.2861	.0805	.0053	.0033
239	4	.297	.762	120.454	1.2609	.0903	.0047	.0040
240	1	.298	.758	120.688	.7688	.0561	.0037	.0032
240	2	.298	.758	120.804	.8528	.0676	.0026	.0038
240	3	.296	.758	120.097	.9146	.0791	.0012	.0045
240	4	.296	.757	119.944	.8972	.0883	.0001	.0054

TABLE VII.- S-76 ROTOR WITH ANHEDRAL TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
300	2	-0.24	0.02	0.01	-0.01	-1.78	-0.24	-0.03
300	3	-.23	2.02	.01	-.01	-1.37	-.27	.02
300	4	-.15	3.99	.01	-.01	-.92	-.22	-.01
300	5	-.10	5.97	.01	-.01	-.25	-.21	-.11
300	6	.00	7.70	.01	-.01	.31	-.16	-.07
300	7	.03	7.93	.01	-.01	.42	-.13	-.09
300	8	.12	9.90	.00	-.01	1.15	-.10	-.08
300	9	.12	11.86	.01	-.01	1.85	-.18	.06
301	1	-.20	.03	.01	-.01	-1.64	-.24	-.05
301	2	-.23	2.00	.01	-.01	-1.25	-.27	-.08
301	3	-.14	3.98	.01	-.01	-.76	-.23	-.03
301	4	-.09	5.97	.01	-.01	-.16	-.20	-.11
301	5	-.05	7.93	.01	-.01	.46	-.20	-.09
301	6	.01	9.91	.01	-.01	1.15	-.19	-.11
301	7	.25	11.87	.01	-.01	1.85	.01	.02
301	8	.21	13.25	.01	-.01	2.33	-.08	.16
302	1	-.26	.03	.01	-.01	-1.62	-.28	-.05
302	2	-.18	2.01	.01	-.01	-1.27	-.22	-.04
302	3	-.17	3.97	.01	-.01	-.78	-.26	-.06
302	4	-.10	5.97	.01	-.01	-.20	-.23	-.10
302	5	.02	7.92	.01	-.01	.49	-.15	-.11
302	6	.16	9.87	.01	-.01	1.15	-.07	-.15
302	7	.15	11.87	.00	-.01	1.89	-.16	.01
303	1	-.25	.02	.01	-.01	-1.69	-.27	-.09
303	2	-.23	.01	.01	-.01	-1.68	-.26	-.04
303	3	-.22	2.00	.01	-.01	-1.33	-.27	.00
303	4	-.13	3.95	.01	-.01	-.80	-.22	-.04
303	5	-.10	5.94	.01	-.01	-.20	-.23	-.07
303	6	-.03	7.90	.01	-.01	.40	-.23	-.11
303	7	.16	9.89	.00	-.01	1.11	-.11	-.04
303	8	.24	10.85	.01	-.01	1.52	-.06	-.04
304	2	-6.41	9.30	-2.80	1.76	2.04	-.18	.16
304	3	-4.42	8.93	-2.87	1.82	2.06	-.17	.11
304	4	-2.39	8.51	-2.94	1.97	2.08	-.13	.05
304	5	-.40	8.08	-3.04	1.81	2.11	-.19	.08
304	6	1.52	7.66	-3.07	1.60	2.13	-.27	.17
304	7	3.66	7.09	-2.93	1.60	2.15	-.19	.05
304	8	7.75	6.14	-2.98	1.30	2.13	-.16	.22
304	9	7.75	6.14	-2.90	1.30	2.18	-.17	.15
304	10	9.85	5.63	-2.90	1.06	2.15	-.11	.21
305	1	9.91	4.70	-2.36	1.34	2.10	-.15	.11
305	2	7.89	5.20	-2.36	1.48	2.13	-.19	.09
305	3	5.88	5.82	-2.52	1.72	2.13	-.15	.08
305	4	3.84	6.37	-2.60	1.87	2.14	-.18	.09

TABLE VII.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
305	5	1.80	6.90	-2.69	1.99	1.84	-0.18	0.11
305	6	-.24	7.50	-2.68	2.09	2.10	-.22	.08
305	7	-2.25	8.05	-2.68	2.33	2.08	-.18	.06
305	8	-4.24	8.61	-2.75	2.33	2.09	-.15	.08
305	9	-6.26	8.99	-2.68	2.17	2.12	-.18	.13
306	1	-6.19	8.99	-2.54	2.66	2.11	-.21	.13
306	2	-4.26	8.32	-2.57	2.49	1.98	-.24	.22
306	3	-2.14	7.86	-2.58	2.62	2.06	-.16	.10
306	4	-.18	7.24	-2.46	2.47	2.09	-.20	.08
306	5	1.86	6.49	-2.35	2.24	2.02	-.21	.07
306	6	3.94	5.90	-2.39	2.04	2.08	-.18	.13
306	7	5.98	5.32	-2.33	1.91	2.10	-.15	.12
306	8	8.01	4.78	-2.33	1.75	2.12	-.13	.14
306	9	9.99	4.17	-2.25	1.57	2.08	-.17	.19



TABLE VII.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_{L}/\sigma$	$C_{D}^{*}/\sigma$	$C_{D}/\sigma$
300	2	0.000	0.583	0.000	0.0087	0.0013	-0.0002	0.0011
300	3	.000	.583	.000	.1906	.0119	-.0003	.0014
300	4	.000	.584	.000	.4138	.0244	-.0003	.0019
300	5	.000	.583	.000	.5793	.0391	-.0003	.0027
300	6	.000	.583	.000	.6791	.0538	-.0002	.0037
300	7	.000	.583	.000	.6864	.0556	-.0002	.0039
300	8	.000	.583	.000	.7277	.0728	-.0001	.0054
301	1	.000	.583	.000	.7343	.0915	.0002	.0076
301	2	.000	.545	.000	.0357	.0036	-.0007	.0012
301	3	.000	.545	.000	.1983	.0126	-.0006	.0014
301	4	.000	.544	.000	.4265	.0252	-.0006	.0019
301	5	.000	.544	.000	.5890	.0398	-.0005	.0027
301	6	.000	.544	.000	.6809	.0555	-.0005	.0039
301	7	.000	.544	.000	.7271	.0729	-.0004	.0055
301	8	.000	.545	.000	.7404	.0907	-.0005	.0074
302	1	.000	.591	.000	.7277	.1031	-.0002	.0092
302	2	.000	.591	.000	.0207	.0029	-.0006	.0012
302	3	.000	.591	.000	.1979	.0126	-.0006	.0014
302	4	.000	.591	.000	.4158	.0246	-.0006	.0019
302	5	.000	.590	.000	.5938	.0397	-.0005	.0027
302	6	.000	.590	.000	.6857	.0560	-.0004	.0039
302	7	.000	.589	.000	.7365	.0738	-.0004	.0055
303	1	.000	.630	.000	.7399	.0917	-.0001	.0076
303	2	.000	.626	.000	.0162	.0021	-.0007	.0012
303	3	.000	.626	.000	.0218	.0026	-.0008	.0012
303	4	.000	.626	.000	.1883	.0120	-.0008	.0014
303	5	.000	.626	.000	.4130	.0243	-.0008	.0019
303	6	.000	.626	.000	.5830	.0392	-.0006	.0027
303	7	.000	.626	.000	.6869	.0554	-.0005	.0038
303	8	.000	.625	.000	.7264	.0732	-.0005	.0055
304	2	.124	.626	.000	.7421	.0839	-.0005	.0066
304	3	.125	.656	49.637	.9955	.0845	-.0065	.0050
304	4	.125	.660	50.195	1.0525	.0844	-.0050	.0047
304	5	.125	.662	50.154	1.1609	.0844	-.0035	.0043
304	6	.125	.663	50.116	1.2991	.0854	-.0013	.0039
304	7	.124	.663	49.719	1.4406	.0850	.0019	.0035
304	8	.123	.662	49.358	1.6512	.0844	.0048	.0030
304	9	.125	.658	50.262	2.2912	.0837	.0111	.0022
304	10	.125	.659	50.244	2.3089	.0842	.0111	.0022
			.656	50.221	2.8129	.0837	.0142	.0018

TABLE VII.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
305	1	0.150	0.669	60.149	5.0870	0.0829	0.0147	0.0010
305	2	.150	.674	60.395	3.6217	.0839	.0119	.0014
305	3	.151	.676	60.636	2.7348	.0847	.0088	.0018
305	4	.151	.678	60.620	2.1525	.0850	.0057	.0023
305	5	.151	.681	60.879	1.7706	.0846	.0025	.0028
305	6	.151	.680	60.616	1.5065	.0854	-.0004	.0033
305	7	.151	.681	60.885	1.2871	.0845	-.0034	.0039
305	8	.151	.679	60.635	1.1552	.0853	-.0064	.0044
305	9	.149	.676	60.120	1.0504	.0846	-.0091	.0048
306	1	.175	.691	70.440	1.0773	.0851	-.0087	.0047
306	2	.175	.692	70.203	1.2093	.0842	-.0057	.0041
306	3	.174	.694	70.193	1.3726	.0847	-.0031	.0036
306	4	.175	.695	70.407	1.6426	.0854	-.0001	.0031
306	5	.175	.694	70.189	2.0707	.0847	.0030	.0024
306	6	.175	.693	70.406	2.6991	.0850	.0061	.0019
306	7	.175	.691	70.400	3.8230	.0849	.0090	.0013
306	8	.175	.688	70.400	5.9695	.0848	.0120	.0008
306	9	.174	.683	69.957	14.2884	.0840	.0151	.0004

TABLE VIII.- S-76 ROTOR WITH SWEPT TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
600	2	-0.32	0.05	0.00	-0.02	-1.87	-0.28	-0.08
600	3	-.23	2.02	.00	-.01	-1.50	-.21	-.03
600	4	-.27	3.97	.00	-.02	-1.02	-.30	-.05
600	5	-.18	5.96	.00	-.01	-.42	-.25	-.08
600	6	.04	7.90	.00	-.02	.37	-.08	.01
600	7	.12	9.89	.01	-.01	1.13	-.08	-.04
600	8	.02	11.86	.00	-.01	1.71	-.25	.05
601	1	-.31	.02	.00	-.02	-1.88	-.27	-.10
601	2	-.22	2.00	.00	-.01	-1.50	-.21	-.03
601	3	-.23	3.98	.00	-.02	-1.02	-.25	-.01
601	4	-.09	5.96	.00	-.01	-.40	-.15	-.03
601	5	.01	7.94	.00	-.01	.35	-.10	-.02
601	6	-.01	9.86	.00	-.01	1.03	-.18	-.06
601	7	.07	11.85	.00	-.01	1.71	-.13	.05
602	1	.03	11.84	.00	-.01	1.69	-.23	.14
602	2	.09	9.89	.00	-.02	1.13	-.11	-.02
602	3	-.07	7.91	.00	-.01	.38	-.22	.01
602	4	-.13	5.96	.00	-.01	-.36	-.22	-.09
602	5	-.19	3.98	.00	-.02	-1.02	-.22	-.06
602	6	-.29	2.00	.00	-.02	-1.51	-.29	-.06
602	7	-.31	.03	.00	-.02	-1.88	-.28	-.12
603	1	-.27	.03	.00	-.02	-1.86	-.24	-.05
603	2	-.25	2.00	.00	-.02	-1.51	-.24	.00
603	3	-.22	3.98	.00	-.01	-1.02	-.26	-.02
603	4	-.12	5.92	.00	-.02	-.41	-.21	-.09
603	5	.11	7.90	.00	-.01	.42	-.07	-.01
603	6	.08	9.88	.00	-.01	1.20	-.17	.05
603	7	.20	11.83	.00	-.01	1.66	-.10	.11
604	1	-6.61	8.43	-1.25	2.72	1.24	-.37	.21
604	2	-4.50	8.00	-1.21	2.77	1.22	-.34	.08
604	3	-2.54	7.62	-1.44	2.86	1.23	-.35	.17
604	4	-.44	7.11	-1.44	2.86	1.21	-.29	.10
604	5	1.53	6.67	-1.47	2.81	1.22	-.29	.08
604	6	3.59	6.28	-1.47	2.81	1.24	-.25	.09
604	7	5.56	5.69	-1.56	2.42	1.25	-.38	.16
604	8	7.62	5.20	-1.60	2.37	1.25	-.29	.19
604	9	9.62	4.71	-1.69	1.95	1.27	-.37	.19
605	1	9.79	3.99	-1.25	2.13	1.29	-.32	.15
605	2	7.72	4.36	-1.25	2.13	1.25	-.37	.15
605	3	5.71	4.90	-1.19	2.29	1.22	-.40	.16
605	4	3.70	5.51	-1.10	2.59	1.25	-.36	.12
605	5	1.67	6.01	-1.17	2.69	1.23	-.38	.20
605	6	-.37	6.68	-1.06	2.94	1.25	-.36	.19
605	7	-2.40	7.20	-.99	3.03	1.26	-.38	.19
605	8	-4.41	7.70	-.99	3.03	1.24	-.35	.19

Table VIII.- Continued

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1s$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
606	2	-4.28	7.73	-0.60	3.39	0.81	-0.31	0.20
606	3	-2.21	7.12	-.64	3.33	.79	-.29	.18
606	4	-.22	6.48	-.83	3.15	.78	-.30	.25
606	5	1.73	5.79	-.89	2.90	.79	-.35	.25
606	6	3.84	5.14	-.95	2.81	.80	-.27	.19
606	7	5.88	4.48	-1.07	2.58	.78	-.27	.23
606	8	7.83	3.92	-1.07	2.32	.80	-.33	.20
606	9	9.86	3.34	-.91	2.16	.80	-.34	.11
607	1	9.94	2.81	-.71	2.42	.77	-.32	.19
607	2	7.85	3.52	-.59	2.60	.79	-.35	.13
607	3	5.86	4.07	-.59	2.60	.75	-.40	.11
607	4	3.81	4.79	-.55	2.88	.76	-.36	.13
607	5	1.83	5.48	-.39	3.09	.73	-.33	.10
607	6	-2.21	6.97	-.26	3.49	.79	-.32	.19
607	7	-4.24	7.58	-.15	3.49	.76	-.36	.19
607	8	-4.22	7.56	-.11	3.58	.77	-.34	.17
607	9	-4.22	7.56	-.11	3.58	.77	-.34	.16
608	1	-.23	6.38	-.14	3.54	.75	-.36	.23
608	2	2.87	5.36	-.31	3.31	.80	-.33	.24
608	3	5.83	4.26	-.23	3.01	.77	-.34	.16

TABLE VIII.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
600	2	0.000	0.588	0.000	0.0066	0.0013	0.0000	0.0014
600	3	.000	.587	.000	.1733	.0132	-.0002	.0016
600	4	.000	.586	.000	.3952	.0281	-.0002	.0022
600	5	.000	.584	.000	.5796	.0478	-.0002	.0034
600	6	.000	.584	.000	.6825	.0724	-.0001	.0054
600	7	.000	.585	.000	.7076	.0954	.0000	.0078
600	8	.000	.582	.000	.6939	.1159	.0004	.0107
601	1	.000	.549	.000	.0093	.0017	-.0007	.0014
601	2	.000	.548	.000	.1902	.0141	-.0007	.0017
601	3	.000	.548	.000	.4072	.0287	-.0007	.0022
601	4	.000	.547	.000	.5860	.0490	-.0007	.0035
601	5	.000	.548	.000	.6809	.0717	-.0006	.0053
601	6	.000	.547	.000	.7087	.0926	-.0003	.0075
601	7	.000	.546	.000	.7090	.1144	-.0003	.0102
602	1	.000	.590	.000	.6877	.1157	.0000	.0107
602	2	.000	.590	.000	.7096	.0957	-.0003	.0078
602	3	.000	.589	.000	.6819	.0726	-.0004	.0054
602	4	.000	.590	.000	.6029	.0501	-.0005	.0035
602	5	.000	.590	.000	.4044	.0288	-.0007	.0023
602	6	.000	.590	.000	.1842	.0138	-.0007	.0016
602	7	.000	.590	.000	.0086	.0016	-.0008	.0014
603	1	.000	.630	.000	.0069	.0014	-.0007	.0014
603	2	.000	.629	.000	.1688	.0130	-.0007	.0016
603	3	.000	.630	.000	.3952	.0281	-.0007	.0022
603	4	.000	.628	.000	.5857	.0484	-.0006	.0034
603	5	.000	.629	.000	.6885	.0736	-.0005	.0054
603	6	.000	.629	.000	.7015	.0979	-.0001	.0082
603	7	.000	.628	.000	.6637	.1171	-.0001	.0113
604	1	.126	.658	50.390	.9710	.0993	-.0100	.0061
604	2	.126	.660	50.381	1.0384	.0988	-.0072	.0056
604	3	.125	.660	50.067	1.1420	.0994	-.0047	.0052
604	4	.125	.662	50.057	1.2563	.0988	-.0025	.0046
604	5	.124	.661	49.732	1.4234	.0994	.0012	.0041
604	6	.124	.659	49.718	1.5916	.0997	.0049	.0037
604	7	.126	.659	50.323	1.9453	.0996	.0095	.0031
604	8	.126	.656	50.317	2.2802	.0985	.0128	.0026
604	9	.125	.652	49.992	2.8622	.0984	.0172	.0021
605	1	.151	.667	60.396	4.8641	.0989	.0178	.0012
605	2	.151	.670	60.406	3.4983	.0982	.0143	.0017
605	3	.151	.674	60.652	2.6800	.0987	.0111	.0022
605	4	.152	.676	60.906	2.1063	.0998	.0075	.0028
605	5	.152	.677	60.909	1.7666	.0997	.0040	.0033
605	6	.153	.678	61.411	1.4612	.1002	.0004	.0041
605	7	.153	.678	61.149	1.2759	.1001	-.0030	.0047
605	8	.151	.676	60.388	1.1200	.0997	-.0065	.0053

TABLE VIII.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
606	2	0.176	0.690	70.545	1.1671	0.1003	0.0047	0.0051
606	3	.176	.691	70.545	1.3358	.0998	-.0024	.0044
606	4	.176	.692	70.539	1.6188	.1002	-.0003	.0037
606	5	.176	.691	70.317	2.0326	.0999	.0017	.0029
606	6	.176	.690	70.313	2.6100	.0998	.0047	.0023
606	7	.175	.687	70.081	3.7637	.0992	.0088	.0016
606	8	.175	.683	69.857	5.9076	.0990	.0128	.0010
606	9	.175	.681	70.070	13.8073	.0986	.0166	.0004
607	1	.201	.694	80.427	-34.4356	.0979	.0169	-.0002
607	2	.201	.699	80.629	12.0541	.0992	.0133	.0005
607	3	.202	.703	81.008	5.4034	.0987	.0099	.0011
607	4	.202	.705	81.013	3.2865	.0997	.0062	.0018
607	5	.199	.705	79.850	2.2705	.0991	.0026	.0026
607	6	.201	.706	80.427	1.4353	.1002	-.0041	.0042
607	7	.201	.704	80.431	1.1955	.0991	-.0073	.0049
607	8	.201	.705	80.611	1.2137	.0993	-.0074	.0049
607	9	.201	.704	80.426	1.2111	.0993	-.0074	.0049
608	1	.216	.667	80.670	1.8898	.0991	-.0008	.0031
608	2	.215	.666	80.266	3.0277	.1002	.0047	.0020
608	3	.215	.663	80.266	6.5929	.0990	.0099	.0009

TABLE IX.- S-76 ROTOR WITH TAPERED TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
800	2	-0.50	0.01	0.00	-0.01	-2.72	-0.41	0.06
800	3	-.36	2.01	.00	-.01	-2.35	-.30	.04
800	4	-.20	3.98	.00	-.01	-1.76	-.16	-.02
800	5	-.16	5.94	.00	-.01	-1.01	-.16	-.05
800	6	-.01	7.88	.00	-.01	-.18	-.06	.06
800	7	.01	9.37	.00	-.01	.58	-.10	.06
800	8	.01	11.82	.00	-.01	1.16	-.15	.20
801	1	.11	11.82	.00	.00	1.24	-.09	.22
801	2	.10	9.87	.00	.00	.72	-.05	.09
801	3	.04	7.90	.00	.00	-.03	-.05	.06
801	4	-.04	5.92	.01	-.01	-.87	-.07	.08
801	5	-.27	3.96	.00	-.01	-1.76	-.26	-.16
801	6	-.32	1.98	.00	-.01	-2.39	-.27	-.09
801	7	-.42	.03	.00	-.01	-2.77	-.33	-.05
802	1	-.40	.03	.00	-.01	-2.79	-.30	.01
802	2	-.31	2.01	.00	-.01	-2.39	-.25	.01
802	3	-.25	3.96	.00	-.01	-1.81	-.23	.00
802	4	-.10	5.94	.00	-.01	-.95	-.15	.04
802	5	-.05	7.88	.00	-.01	-.04	-.15	-.01
802	6	.10	9.86	.00	.00	.75	-.05	.07
802	7	.04	11.85	.00	.00	1.22	-.17	.23
803	1	.20	11.85	.00	.00	1.37	-.05	.36
803	2	.05	9.86	.00	.00	.87	-.16	.23
803	3	.10	7.88	.01	.00	.21	-.03	.08
803	4	-.04	5.92	.00	.00	-.71	-.10	.04
803	5	-.25	3.97	.01	.00	-1.75	-.25	-.12
803	6	-.29	1.98	.00	-.01	-2.39	-.24	-.05
803	7	-.40	.02	.00	-.01	-2.77	-.32	-.04
804	2	-4.64	7.73	-1.54	2.79	.14	-.36	.08
804	3	-2.61	7.25	-1.54	2.79	.08	-.36	.01
804	4	-.60	6.81	-1.54	2.79	.11	-.37	.01
804	5	1.40	6.47	-1.54	2.79	.12	-.36	-.01
804	6	3.49	5.96	-1.67	2.71	.21	-.29	.02
804	7	5.56	5.51	-1.74	2.61	.26	-.26	.08
804	8	7.55	5.00	-1.75	2.31	.26	-.32	.13
804	9	9.54	4.46	-1.71	2.00	.20	-.36	.10
805	1	9.67	3.67	-1.66	1.96	.19	-.36	.19
805	2	7.60	4.13	-1.51	2.16	.19	-.37	.09
805	3	5.53	4.64	-1.41	2.30	.17	-.43	.06
805	4	3.61	5.20	-1.31	2.63	.12	-.32	.03
805	5	1.51	5.69	-1.32	2.63	.15	-.42	.09
805	6	-.51	6.35	-1.13	2.88	.09	-.35	.01
805	7	-2.57	6.86	-1.13	2.88	.11	-.40	.06

Table IX.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
806	2	-4.48	7.39	-0.63	3.19	0.34	-0.44	0.04
806	3	-2.38	6.72	-.63	3.18	.35	-.34	-.02
806	4	-.39	6.16	-.82	3.06	.38	-.38	.06
806	5	1.59	5.52	-.97	2.85	.38	-.35	.05
806	6	3.65	4.92	-1.02	2.78	.39	-.32	.02
806	7	5.72	4.31	-1.07	2.71	.38	-.30	.01
806	8	7.71	3.66	-1.28	2.43	.34	-.35	.09
806	9	9.80	3.11	-1.22	2.38	.39	-.29	.09
807	1	9.87	2.59	-.92	2.48	.38	-.32	.10
807	2	7.73	3.22	-.92	2.48	.37	-.44	.12
807	3	5.83	3.80	-.80	2.81	.23	-.30	.02
807	4	3.73	4.58	-.74	2.89	.33	-.39	.05
807	5	1.69	5.15	-.70	2.95	.32	-.40	.07
807	6	-.37	5.82	-.62	3.05	.34	-.41	.10
807	7	-2.28	6.51	-.46	3.28	.37	-.36	.12
808	2	-2.34	6.56	-.62	3.29	.76	-.37	.17
808	3	-.34	5.88	-.71	3.17	.83	-.37	.11
809	1	-.55	4.35	-.72	2.02	-.10	-.41	.12
809	2	2.52	3.53	-.86	1.83	.00	-.38	.12
809	3	5.68	2.77	-.86	1.83	.01	-.27	.12
810	1	5.60	4.85	-1.14	2.56	.92	-.35	.16
810	2	2.53	5.62	-.99	2.77	.88	-.39	.11
810	3	-.53	6.51	-.94	3.07	.84	-.38	.10
811	1	-.44	4.01	-1.05	1.91	-.14	-.36	.09
811	2	2.65	3.20	-1.33	1.77	-.10	-.33	.12
811	3	5.63	2.52	-1.39	1.68	.02	-.35	.11
812	1	5.63	4.55	-1.51	2.56	.94	-.36	.07
812	2	2.55	5.16	-1.45	2.64	.87	-.43	.15
812	3	-.48	6.08	-1.30	2.85	.81	-.41	.10
814	3	-4.06	6.46	-1.15	2.49	.68	-.28	.08
814	4	-.02	5.24	-1.41	2.24	.76	-.26	.05
814	5	3.05	4.37	-1.89	1.83	.73	-.29	.13
815	1	.15	4.64	-1.05	2.18	.69	-.26	.17
815	2	3.09	3.76	-1.42	1.93	.68	-.37	.09
815	3	6.17	2.79	-1.63	1.64	.61	-.33	.13
816	1	3.05	3.99	-.95	2.58	.64	-.37	.12
816	2	6.13	3.05	-1.08	2.47	.70	-.32	.13
816	3	.01	5.10	-.80	2.79	.70	-.26	.17
817	1	-.12	5.58	-.52	3.18	.78	-.29	.21
817	2	3.04	4.60	-.62	3.01	.86	-.23	.18
817	3	6.04	3.64	-.51	2.72	.81	-.25	.11
818	1	5.88	2.13	-1.27	1.39	-.12	-.29	.12
818	2	5.88	3.18	-1.39	1.74	.40	-.29	.05
818	3	5.81	4.23	-1.57	2.13	.84	-.35	.10
818	4	5.83	5.38	-1.61	2.58	1.31	-.36	.12



TABLE IX.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1s$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
819	1	-4.13	6.64	-0.90	2.91	0.86	-0.32	0.13
819	2	-2.05	6.02	-1.03	2.96	.86	-.23	.17
819	3	-.04	5.35	-1.09	2.79	.88	-.25	.14
819	4	1.91	4.78	-1.16	2.71	.83	-.29	.13
819	5	3.94	4.10	-1.36	2.44	.81	-.36	.19
819	6	6.00	3.60	-1.35	2.44	.86	-.28	.13
819	7	8.09	3.04	-1.41	2.36	.89	-.26	.23
819	8	10.10	2.35	-1.21	2.17	.82	-.22	.17
820	2	-4.22	7.14	-1.32	2.91	.64	-.31	.15
820	3	-2.17	6.42	-1.31	2.91	.62	-.27	.15
820	4	-.23	5.82	-1.33	2.70	.52	-.33	.08
820	5	1.82	5.21	-1.45	2.54	.48	-.32	.11
820	6	3.81	4.69	-1.55	2.40	.47	-.35	.17
820	7	5.97	4.13	-1.55	2.40	.57	-.29	.11
820	8	7.95	3.68	-1.67	2.04	.65	-.31	.15
820	9	9.97	3.04	-1.60	1.87	.54	-.34	.15
821	1	9.88	3.71	-1.63	1.90	.60	-.32	.03
821	2	7.78	4.13	-1.73	1.94	.63	-.38	.09
821	3	5.71	4.60	-1.65	2.12	.58	-.37	.05
821	4	3.70	5.16	-1.71	2.27	.58	-.41	.08
821	5	1.57	5.66	-1.65	2.36	.61	-.47	.08
821	6	-.40	6.09	-1.64	2.36	.50	-.46	.07
821	7	-2.44	6.71	-1.62	2.62	.52	-.41	.07
821	8	-4.36	7.09	-1.62	2.62	.55	-.36	.12
822	2	.07	.03	-.23	.05	-1.65	-.11	.17
822	3	-.10	.59	-.15	.17	-1.32	-.30	.06
822	4	-.14	1.19	-.37	.52	-.99	-.35	.14
822	5	-.24	1.53	-.31	.61	-.70	-.46	.12
822	6	-.19	2.15	-.21	1.01	-.35	-.42	.08
822	7	-.10	2.81	-.39	1.52	-.01	-.33	.17
822	8	.02	3.60	-.25	2.13	.32	-.20	-.02
822	9	-.16	4.21	-.43	2.26	.67	-.41	.04
822	10	-.27	4.87	-.55	2.44	1.01	-.54	.12
822	11	-.10	5.61	-.46	3.05	1.28	-.38	.08
823	1	-3.13	.88	-.17	-.04	-1.76	-.30	.14
823	2	-3.21	1.55	-.25	.33	-1.43	-.38	.09
823	3	-3.12	2.01	-.17	.70	-1.17	-.29	.04
823	4	-3.08	2.60	-.15	1.05	-.76	-.26	.10
823	5	-3.07	3.13	-.07	1.35	-.52	-.25	.09
823	6	-3.21	3.74	-.07	1.54	-.16	-.43	.08
823	7	-3.10	4.47	-.19	2.12	.16	-.30	.07
823	8	-3.15	5.30	-.28	2.54	.58	-.37	.04
823	9	-3.18	6.00	-.39	2.91	.88	-.40	.06
823	10	-3.11	6.54	-.35	3.23	1.06	-.35	.02

TABLE IX.- Continued

(a) Concluded

Run no.	Pt. no.	$\sigma_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
824	1	-6.23	1.74	-0.09	0.09	-1.70	-0.35	0.10
824	2	-6.41	2.37	-.06	.23	-1.37	-.54	.03
824	3	-6.21	3.04	.12	.79	-1.06	-.33	-.04
824	4	-6.25	3.56	.04	1.00	-.74	-.37	.06
824	5	-6.23	4.04	.12	1.31	-.42	-.36	.06
824	6	-6.25	4.83	.27	1.71	-.05	-.40	-.08
824	7	-6.19	5.49	-.05	2.18	.27	-.34	.05
824	8	-6.20	6.20	-.21	2.55	.61	-.36	.05
824	9	-6.17	6.93	-.30	3.00	.90	-.34	.01
824	10	-6.20	7.77	-.30	3.47	1.24	-.37	.07
825	1	-6.22	1.84	-.01	.01	-1.79	-.33	.02
825	2	-6.28	2.52	-.26	.35	-1.41	-.40	.05
825	3	-6.16	3.06	-.22	.77	-1.13	-.28	.05
825	4	-6.11	3.52	-.05	1.02	-.84	-.24	.04
825	5	-6.26	4.02	.00	1.08	-.45	-.42	.08
825	6	-6.19	4.58	.04	1.50	-.18	-.32	.02
825	7	-6.24	5.23	-.16	1.82	.20	-.39	.09
825	8	-6.27	5.95	-.24	2.20	.58	-.44	.05
825	9	-6.21	6.60	-.36	2.54	.88	-.41	.05
825	10	-6.14	7.50	-.30	3.28	1.21	-.34	.09
826	1	-3.20	.95	-.52	-.08	-1.65	-.37	.19
826	2	-3.07	1.53	-.51	.41	-1.40	-.24	.07
826	3	-3.19	2.08	-.54	.55	-1.07	-.38	.07
826	4	-3.03	2.52	-.46	.95	-.72	-.24	.18
826	5	-3.15	3.03	-.36	1.08	-.39	-.36	.12
826	6	-3.26	4.24	-.20	1.68	.25	-.52	.07
826	7	-3.13	4.98	-.15	2.21	.60	-.40	-.03
826	8	-3.03	5.71	-.64	2.71	.92	-.30	.14
826	9	-3.06	6.50	-.49	3.09	1.29	-.36	.13
827	1	-.02	.11	-.52	-.10	-1.69	-.26	.16
827	2	-.20	.70	-.58	.10	-1.36	-.43	.04
827	3	-.14	1.14	-.65	.45	-1.05	-.40	.09
827	4	-.08	1.55	-.66	.65	-.74	-.34	.08
827	5	-.10	2.09	-.62	.95	-.41	-.37	.09
827	6	-.07	2.66	-.50	1.33	-.09	-.37	-.01
827	7	-.01	3.27	-.69	1.72	.20	-.30	.08
827	8	-.04	3.91	-.89	2.01	.56	-.36	.08
827	9	-.09	4.60	-.88	2.31	.89	-.42	.06
827	10	-.03	5.40	-.61	2.83	1.26	-.37	.07

TABLE IX.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
800	2	0.000	0.546	0.000	0.0044	0.0010	0.0001	0.0013
800	3	.000	.545	.000	.1706	.0126	-.0001	.0016
800	4	.000	.545	.000	.4346	.0302	-.0003	.0023
800	5	.000	.544	.000	.6125	.0526	-.0002	.0037
800	6	.000	.545	.000	.6867	.0755	-.0002	.0057
800	7	.000	.543	.000	.6889	.0969	-.0001	.0082
800	8	.000	.545	.000	.6306	.1137	.0001	.0114
801	1	.000	.584	.000	.6142	.1175	-.0001	.0123
801	2	.000	.587	.000	.6660	.1021	-.0004	.0092
801	3	.000	.584	.000	.6896	.0807	-.0005	.0062
801	4	.000	.585	.000	.6379	.0570	-.0006	.0040
801	5	.000	.586	.000	.4440	.0316	-.0006	.0024
801	6	.000	.585	.000	.1851	.0135	-.0006	.0016
801	7	.000	.584	.000	.0096	.0017	-.0006	.0013
802	1	.000	.591	.000	.0068	.0013	-.0006	.0013
802	2	.000	.591	.000	.1856	.0136	-.0006	.0016
802	3	.000	.591	.000	.4398	.0307	-.0005	.0023
802	4	.000	.589	.000	.6331	.0557	-.0005	.0039
802	5	.000	.590	.000	.6903	.0798	-.0003	.0061
802	6	.000	.590	.000	.6663	.1023	-.0003	.0092
802	7	.000	.589	.000	.6061	.1169	.0001	.0124
803	1	.000	.626	.000	.5884	.1180	-.0001	.0129
803	2	.000	.628	.000	.6359	.1039	.0000	.0099
803	3	.000	.627	.000	.6877	.0851	-.0005	.0068
803	4	.000	.627	.000	.6504	.0600	-.0006	.0042
803	5	.000	.628	.000	.4506	.0314	-.0007	.0023
803	6	.000	.626	.000	.1772	.0133	-.0008	.0016
803	7	.000	.626	.000	.0082	.0015	-.0008	.0013
804	2	.126	.657	50.431	1.0215	.0995	-.0042	.0058
804	3	.126	.658	50.440	1.1108	.0985	-.0019	.0052
804	4	.126	.658	50.432	1.2513	.0989	.0004	.0047
804	5	.125	.657	50.111	1.3974	.0999	.0025	.0042
804	6	.125	.657	50.113	1.5988	.0990	.0046	.0037
804	7	.125	.655	50.101	1.8999	.0994	.0079	.0031
804	8	.125	.651	49.781	2.2971	.0984	.0117	.0025
804	9	.126	.648	50.398	2.9915	.0991	.0158	.0020
805	1	.151	.663	60.653	4.9538	.0985	.0165	.0012
805	2	.152	.667	60.662	3.4198	.0980	.0125	.0017
805	3	.152	.669	60.667	2.6994	.0994	.0090	.0022
805	4	.152	.672	60.939	2.0898	.0987	.0050	.0028
805	5	.152	.673	60.941	1.7904	.0991	.0016	.0033
805	6	.151	.673	60.420	1.4288	.0993	-.0022	.0041
805	7	.152	.673	60.686	1.2399	.0989	-.0054	.0047

Table IX.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
806	2	0.176	0.683	70.391	1.1467	0.0998	-0.0047	0.0052
806	3	.175	.685	70.173	1.3196	.0988	-.0029	.0044
806	4	.176	.686	70.398	1.5994	.1002	-.0013	.0037
806	5	.175	.685	70.169	1.9483	.0998	.0013	.0030
806	6	.176	.685	70.621	2.4934	.0999	.0050	.0024
806	7	.176	.682	70.406	3.3114	.0994	.0086	.0018
806	8	.175	.680	70.189	5.1090	.0976	.0124	.0011
806	9	.175	.676	70.178	10.3825	.0978	.0160	.0006
807	1	.201	.689	80.552	-37.4000	.0982	.0168	-.0002
807	2	.202	.693	80.761	12.1561	.0988	.0134	.0005
807	3	.202	.696	80.770	4.7567	.0974	.0090	.0012
807	4	.202	.699	80.755	3.1044	.0994	.0058	.0019
807	5	.201	.700	80.580	2.2915	.0993	.0022	.0026
807	6	.200	.699	80.184	1.7821	.0989	-.0014	.0033
807	7	.200	.699	80.190	1.4587	.0995	-.0048	.0040
808	2	.200	.701	80.019	1.4339	.0989	.0009	.0041
808	3	.201	.702	80.214	1.7715	.0993	.0044	.0033
809	1	.163	.636	60.655	1.5829	.0739	.0032	.0024
809	2	.163	.634	60.642	2.2415	.0743	.0068	.0017
809	3	.162	.632	60.373	3.4340	.0736	.0100	.0011
810	1	.162	.631	60.245	3.1505	.0994	.0118	.0019
810	2	.162	.633	60.242	2.1524	.0990	.0050	.0027
810	3	.162	.636	60.496	1.5855	.0995	-.0018	.0037
811	1	.163	.689	65.765	1.6336	.0736	-.0027	.0023
811	2	.162	.688	65.521	2.2399	.0731	.0016	.0017
811	3	.162	.685	65.496	3.4196	.0739	.0061	.0011
812	1	.161	.684	64.872	2.8972	.1005	.0091	.0021
812	2	.161	.688	65.118	2.1249	.0991	.0040	.0028
812	3	.162	.688	65.357	1.5646	.0994	-.0012	.0038
814	3	.162	.722	69.486	1.1392	.1000	.0000	.0052
814	4	.161	.724	69.241	1.5545	.1002	.0073	.0038
814	5	.162	.723	69.451	2.1027	.0997	.0133	.0028
815	1	.202	.747	86.534	1.8740	.0982	.0081	.0031
815	2	.202	.746	86.516	2.7659	.0996	.0131	.0022
815	3	.201	.744	86.335	5.0046	.0980	.0177	.0012
816	1	.216	.711	87.135	3.2817	.0983	.0087	.0018
816	2	.216	.708	87.323	7.4317	.0986	.0127	.0008
816	3	.217	.713	87.685	1.9594	.0987	.0010	.0030
817	1	.216	.660	80.652	1.9261	.0992	-.0002	.0030
817	2	.215	.658	80.249	3.1241	.0998	.0052	.0019
817	3	.216	.654	80.436	6.6537	.0995	.0107	.0009
818	1	.152	.667	60.803	2.9052	.0703	.0068	.0012
818	2	.151	.666	60.453	2.8587	.0849	.0085	.0016
818	3	.150	.666	60.102	2.7502	.0988	.0103	.0021
818	4	.151	.665	60.280	2.4514	.1135	.0121	.0030

Table IX.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
819	1	0.187	0.689	74.985	1.2347	0.0992	-0.0064	0.0048
819	2	.188	.692	75.409	1.4616	.0993	-.0032	.0040
819	3	.188	.691	75.195	1.8030	.0995	.0003	.0033
819	4	.188	.691	75.187	2.2135	.0996	.0038	.0027
819	5	.188	.689	75.186	3.0025	.0987	.0076	.0019
819	6	.187	.686	74.741	4.1653	.0991	.0109	.0014
819	7	.188	.684	75.157	7.6580	.0999	.0147	.0008
819	8	.188	.680	75.157	35.7182	.0971	.0177	.0002
820	2	.163	.676	65.033	1.1413	.1008	-.0044	.0053
820	3	.164	.679	65.500	1.3250	.0994	-.0026	.0044
820	4	.164	.679	65.468	1.5679	.0994	-.0006	.0038
820	5	.164	.679	65.442	1.9142	.0990	.0018	.0031
820	6	.163	.677	65.174	2.3216	.0989	.0055	.0025
820	7	.164	.676	65.628	3.0550	.0990	.0091	.0019
820	8	.162	.673	65.108	4.2323	.0994	.0132	.0014
820	9	.162	.670	65.092	7.0079	.0975	.0166	.0008
821	1	.139	.656	55.659	3.8336	.0981	.0160	.0015
821	2	.140	.661	55.919	3.0350	.0986	.0126	.0019
821	3	.138	.664	55.338	2.3428	.0975	.0088	.0025
821	4	.138	.665	55.325	1.9474	.0988	.0057	.0030
821	5	.139	.667	55.593	1.6618	.0995	.0023	.0035
821	6	.140	.668	55.872	1.4067	.0986	-.0010	.0041
821	7	.138	.665	55.017	1.2229	.0994	-.0047	.0048
821	8	.139	.666	55.565	1.1124	.0991	-.0078	.0053
822	2	.219	.694	85.042	.1327	.0106	.0038	.0015
822	3	.218	.694	84.836	.3583	.0199	.0040	.0015
822	4	.217	.694	84.611	.7093	.0308	.0042	.0014
822	5	.218	.693	84.580	1.0606	.0406	.0044	.0014
822	6	.217	.693	84.551	1.3619	.0506	.0044	.0016
822	7	.217	.693	84.330	1.5766	.0604	.0043	.0018
822	8	.217	.692	84.119	1.6905	.0704	.0041	.0021
822	9	.216	.692	84.082	1.8791	.0805	.0045	.0023
822	10	.217	.691	84.051	1.9587	.0903	.0051	.0026
822	11	.216	.693	84.019	1.8795	.0990	.0047	.0031
823	1	.217	.694	84.716	.1214	.0104	.0029	.0016
823	2	.218	.693	84.681	.3418	.0210	.0024	.0016
823	3	.218	.692	84.648	.5305	.0292	.0017	.0017
823	4	.217	.693	84.420	.8165	.0417	.0010	.0019
823	5	.218	.692	84.580	.9412	.0493	.0006	.0022
823	6	.218	.692	84.545	1.1267	.0597	.0002	.0024
823	7	.218	.692	84.515	1.2186	.0697	-.0007	.0028
823	8	.218	.691	84.470	1.3334	.0815	-.0012	.0033
823	9	.217	.690	84.066	1.3569	.0904	-.0018	.0038
823	10	.217	.691	84.230	1.3468	.0970	-.0026	.0042

Table IX.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
824	1	0.217	0.689	84.359	0.1112	0.0100	-0.0003	0.0017
824	2	.217	.688	84.136	.2921	.0200	-.0018	.0018
824	3	.216	.689	84.106	.4571	.0294	-.0033	.0021
824	4	.217	.688	84.061	.6301	.0400	-.0045	.0024
824	5	.217	.688	84.406	.7596	.0491	-.0057	.0027
824	6	.218	.688	84.558	.8753	.0603	-.0073	.0032
824	7	.217	.689	84.339	.9593	.0696	-.0087	.0036
824	8	.217	.688	84.299	1.0203	.0793	-.0098	.0042
824	9	.216	.688	84.083	1.0337	.0883	-.0110	.0048
824	10	.217	.687	84.053	1.0504	.0991	-.0118	.0056
825	1	.217	.715	87.666	.0931	.0087	-.0026	.0017
825	2	.217	.715	87.446	.2987	.0202	-.0036	.0018
825	3	.216	.716	87.412	.4518	.0287	-.0044	.0021
825	4	.216	.715	87.379	.6096	.0383	-.0053	.0023
825	5	.216	.715	87.161	.7705	.0492	-.0061	.0027
825	6	.216	.714	87.131	.8705	.0579	-.0070	.0030
825	7	.216	.714	87.093	.9664	.0687	-.0077	.0035
825	8	.216	.715	87.058	1.0409	.0795	-.0085	.0041
825	9	.215	.713	86.652	1.0714	.0891	-.0093	.0047
825	10	.215	.713	86.793	1.0389	.0990	-.0105	.0057
826	1	.218	.719	88.022	.1309	.0106	-.0017	.0016
826	2	.218	.718	87.989	.2985	.0186	-.0021	.0016
826	3	.218	.719	87.955	.5561	.0290	-.0023	.0017
826	4	.217	.719	87.733	.8214	.0405	-.0029	.0019
826	5	.217	.718	87.513	1.0283	.0502	-.0031	.0021
826	6	.217	.717	87.446	1.3142	.0696	-.0036	.0026
826	7	.217	.718	87.585	1.3469	.0793	-.0042	.0031
826	8	.216	.716	87.188	1.3895	.0901	-.0044	.0037
826	9	.215	.717	86.970	1.3624	.1006	-.0047	.0044
827	1	.217	.720	87.657	.1457	.0113	-.0007	.0015
827	2	.217	.719	87.434	.4002	.0213	-.0005	.0015
827	3	.216	.720	87.411	.7300	.0309	-.0004	.0014
827	4	.216	.719	87.371	1.0622	.0405	-.0002	.0014
827	5	.216	.720	87.333	1.3977	.0507	.0000	.0015
827	6	.216	.719	87.121	1.6840	.0606	.0001	.0017
827	7	.215	.718	86.904	1.8478	.0696	.0002	.0019
827	8	.216	.719	87.225	1.9782	.0800	.0007	.0021
827	9	.215	.718	87.015	2.0039	.0899	.0010	.0025
827	10	.215	.718	86.796	1.9570	.1004	.0010	.0031

TABLE X.- S-76 ROTOR WITH SQUARE TIP

(a) Rotor controls and model attitude

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
901	2	-0.29	0.01	0.00	-0.01	-2.57	-0.29	-0.03
901	3	-.26	1.00	.00	-.01	-2.37	-.27	-.03
901	4	-.23	1.98	.00	-.01	-2.13	-.25	-.06
901	5	-.06	3.97	.00	-.01	-1.40	-.13	-.02
901	6	.01	5.92	.00	-.01	-.58	-.14	-.01
901	7	.17	7.93	.00	-.01	.33	-.03	.06
901	8	.13	9.87	.00	-.01	.94	-.13	.02
901	9	.15	11.83	.00	-.01	1.40	-.14	.12
902	1	.19	11.83	.00	-.01	1.39	-.06	.21
902	2	.17	9.86	.00	-.01	.88	-.03	.13
902	3	.13	7.88	.00	-.01	.17	-.03	.06
902	4	-.01	5.92	.00	-.01	-.61	-.14	.02
902	5	-.03	3.98	.01	-.01	-1.37	-.09	-.09
902	6	-.21	2.01	.01	-.01	-2.09	-.23	-.15
902	7	-.26	.04	.00	-.01	-2.53	-.26	-.12
903	1	-.30	.04	.00	-.01	-2.55	-.30	-.05
903	2	-.17	2.00	.01	-.01	-2.11	-.19	-.04
903	3	-.08	3.97	.00	-.01	-1.39	-.18	.00
903	4	.06	5.93	.00	-.01	-.53	-.09	.05
903	5	.20	7.90	.00	-.01	.31	-.01	.03
903	6	.17	9.86	.00	-.01	.97	-.10	.11
903	7	.17	11.83	.00	-.01	1.41	-.15	.35
904	1	.13	11.83	.00	-.01	1.38	-.24	.23
904	2	.19	9.85	.00	-.01	.92	-.13	.20
904	3	.17	7.92	.00	-.01	.45	-.11	.19
904	4	.10	5.91	.00	-.01	-.39	-.09	.04
904	5	-.06	3.97	.00	-.01	-1.32	-.16	.01
904	6	-.11	1.99	.00	-.01	-2.16	-.17	-.13
904	7	-.22	.02	.00	-.01	-2.60	-.24	-.08
905	1	-2.46	6.52	-1.76	2.97	.60	-.29	.12
905	2	-4.46	6.79	-1.75	2.97	.59	-.26	.21
905	3	-.46	5.94	-1.97	2.83	.61	-.34	.19
905	4	1.57	5.51	-1.97	2.83	.60	-.31	.18
905	5	3.63	5.17	-1.97	2.83	.63	-.21	.15
905	6	5.56	4.63	-1.96	2.50	.46	-.29	.16
905	7	7.72	4.10	-1.87	2.53	.61	-.21	.20
905	8	9.77	3.70	-1.95	2.20	.57	-.23	.16
906	1	9.83	2.92	-1.60	2.15	.49	-.29	.13
906	2	7.87	3.44	-1.61	2.44	.54	-.24	.13
906	3	5.78	3.99	-1.68	2.61	.56	-.33	.17
906	4	3.65	4.48	-1.60	2.72	.55	-.35	.15
906	5	1.73	5.01	-1.51	2.84	.55	-.27	.08
906	6	-.35	5.53	-1.46	2.92	.59	-.39	.13

TABLE X.- Continued

(a) Continued

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
907	2	-2.30	6.10	-1.08	3.34	1.23	-0.35	0.17
907	3	-.22	5.50	-1.08	3.34	1.25	-.29	.14
907	4	1.83	4.84	-1.30	3.19	1.22	-.27	.20
907	5	3.91	4.27	-1.30	3.19	1.21	-.19	.14
907	6	5.99	3.69	-1.46	2.97	1.20	-.18	.18
907	7	7.88	3.03	-1.65	2.56	1.15	-.32	.27
907	8	9.95	2.44	-1.40	2.46	1.16	-.22	.11
908	1	10.00	1.98	-1.20	2.74	1.22	-.27	.16
908	2	7.96	2.61	-1.16	2.93	1.21	-.27	.13
908	3	5.90	3.30	-1.08	3.05	1.24	-.35	.11
908	4	3.92	3.92	-1.03	3.23	1.21	-.32	.11
908	5	2.01	4.58	-.85	3.47	1.12	-.17	.09
908	6	-.15	5.25	-.85	3.47	1.14	-.30	.17
909	1	-.30	3.36	-1.50	2.11	.24	-.33	.21
909	2	2.75	2.65	-1.65	1.89	.39	-.32	.15
909	3	5.85	1.85	-1.74	1.77	.46	-.26	.22
910	1	5.86	3.74	-1.53	2.50	1.08	-.31	.08
910	2	2.72	4.59	-1.59	2.80	1.45	-.40	.11
910	3	-.27	5.43	-1.44	3.09	1.49	-.33	.14
911	1	-.17	5.02	-1.56	2.92	1.42	-.30	.19
911	2	2.77	4.13	-1.95	2.38	1.33	-.42	.13
911	3	5.90	3.34	-2.18	2.06	1.30	-.37	.27
912	1	6.09	1.71	-2.48	.93	.00	-.20	.25
912	2	2.92	2.33	-2.43	.87	.07	-.34	.23
913	2	-.23	3.14	-1.88	1.29	.17	-.34	.10
913	3	2.99	2.42	-2.10	1.00	.10	-.31	.04
913	4	6.10	1.70	-2.27	.77	.01	-.26	.07
914	1	6.16	2.88	-1.45	2.95	1.07	-.24	.09
914	2	3.05	3.66	-1.48	2.91	.86	-.34	.12
914	3	-.03	4.65	-.98	3.23	1.16	-.34	.23
914	4	.00	4.65	-.98	3.23	1.17	-.31	.22
915	1	-.01	5.02	-.63	3.59	1.10	-.29	.18
915	2	2.93	3.99	-.81	3.34	1.14	-.33	.06
915	3	6.02	3.03	-1.00	3.28	1.17	-.32	.12
916	1	5.81	1.83	-1.56	1.72	.21	-.32	.20
916	2	5.77	2.90	-1.57	2.09	.71	-.37	.12
916	3	5.78	4.05	-1.71	2.51	1.18	-.40	.15
916	4	5.84	5.21	-1.62	3.18	1.65	-.33	.10
917	2	-.21	1.05	-.48	.93	-.78	-.33	-.01
917	3	-.64	1.32	-1.39	.63	-.58	-.81	.24
917	4	-.05	2.21	-.79	1.85	-.24	-.17	.20
917	5	-.30	2.83	-.87	1.74	.15	-.54	.06
917	6	-.34	3.36	-1.38	2.17	.39	-.53	.32
917	7	-.12	4.38	-.87	3.08	.72	-.30	.17
917	8	-.16	5.05	-.65	3.39	1.05	-.39	.18



Table X.- Concluded

(a) Concluded

Run no.	Pt. no.	$\alpha_{TPP}$ , deg	$\theta_C$ , deg	$A_1$ , deg	$B_1$ , deg	$a_0$ , deg	$a_{1s}$ , deg	$b_{1s}$ , deg
918	1	-3.27	1.70	-0.80	0.89	-1.02	-0.40	0.23
918	2	-3.23	2.39	-.63	1.33	-.62	-.34	.22
918	3	-3.40	3.03	-.64	1.49	-.22	-.56	.19
918	4	-3.44	3.79	-.74	1.88	.16	-.62	.19
918	5	-3.39	4.51	-.83	2.38	.50	-.57	.18
918	6	-3.29	5.33	-.65	3.01	.84	-.45	.15
918	7	-3.26	5.33	-.65	3.01	.85	-.44	.14
918	8	-3.05	6.13	-.48	3.75	1.14	-.24	.23
919	1	-6.02	2.89	.13	1.27	-.89	-.11	.00
919	2	-6.63	3.38	-.38	.83	-.45	-.81	.03
919	3	-6.13	3.91	-.72	1.84	-.29	-.28	.41
919	4	-6.06	4.77	-.42	2.43	.09	-.22	.24
919	5	-6.50	5.45	-.48	2.22	.55	-.70	.08
919	6	-6.16	6.31	-.39	3.17	.86	-.33	.14
919	7	-6.19	7.11	-.13	3.63	1.19	-.38	.11
920	1	-5.96	2.94	-.35	1.16	-.95	-.13	.13
920	2	-6.09	3.34	-.32	1.14	-.60	-.30	.14

TABLE X.- Continued

(b) Rotor performance parameters

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
901	2	0.000	0.587	0.000	0.0463	0.0050	-0.0001	0.0014
901	3	.000	.587	.000	.1405	.0112	-.0002	.0016
901	4	.000	.587	.000	.2612	.0188	-.0002	.0018
901	5	.000	.587	.000	.5216	.0399	-.0003	.0029
901	6	.000	.586	.000	.6624	.0641	-.0001	.0046
901	7	.000	.589	.000	.7084	.0896	.0000	.0071
901	8	.000	.588	.000	.6810	.1095	.0002	.0100
901	9	.000	.587	.000	.6278	.1261	.0001	.0134
902	1	.000	.548	.000	.6519	.1242	-.0001	.0126
902	2	.000	.548	.000	.6982	.1068	-.0001	.0094
902	3	.000	.550	.000	.7022	.0857	-.0002	.0067
902	4	.000	.550	.000	.6572	.0627	-.0002	.0045
902	5	.000	.548	.000	.5368	.0413	-.0005	.0029
902	6	.000	.549	.000	.2901	.0202	-.0004	.0019
902	7	.000	.548	.000	.0639	.0062	-.0005	.0014
903	1	.000	.594	.000	.0620	.0060	-.0004	.0014
903	2	.000	.595	.000	.2863	.0197	-.0004	.0018
903	3	.000	.594	.000	.5361	.0405	-.0003	.0029
903	4	.000	.594	.000	.6739	.0662	-.0002	.0047
903	5	.000	.594	.000	.7018	.0891	.0000	.0071
903	6	.000	.593	.000	.6827	.1114	.0002	.0102
903	7	.000	.594	.000	.6244	.1260	.0004	.0134
904	1	.000	.629	.000	.5964	.1251	.0009	.0139
904	2	.000	.632	.000	.6423	.1115	.0003	.0109
904	3	.000	.633	.000	.6852	.0933	.0002	.0078
904	4	.000	.635	.000	.6730	.0689	.0001	.0050
904	5	.000	.635	.000	.5569	.0432	-.0001	.0030
904	6	.000	.635	.000	.2766	.0194	-.0002	.0018
904	7	.000	.634	.000	.0550	.0055	-.0003	.0014
905	1	.127	.662	50.680	1.1458	.0998	-.0045	.0052
905	2	.127	.662	50.694	1.0569	.0988	-.0085	.0055
905	3	.127	.663	50.682	1.2936	.0989	-.0011	.0045
905	4	.126	.664	50.364	1.4553	.0990	.0027	.0040
905	5	.126	.661	50.350	1.6347	.0998	.0063	.0036
905	6	.125	.659	50.027	1.9534	.0991	.0103	.0030
905	7	.127	.658	50.638	2.3838	.0984	.0138	.0025
905	8	.126	.653	50.320	2.9075	.0986	.0178	.0020
906	1	.151	.667	60.435	4.6961	.0977	.0184	.0013
906	2	.152	.671	60.690	3.3603	.0986	.0148	.0018
906	3	.152	.673	60.682	2.6330	.0997	.0115	.0023
906	4	.151	.675	60.429	2.0641	.0991	.0076	.0028
906	5	.152	.676	60.685	1.7128	.0995	.0041	.0034
906	6	.153	.677	60.935	1.4835	.1003	.0009	.0040

TABLE X.- Continued

(b) Continued

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_Q/\sigma$
907	2	0.173	0.692	69.528	1.3216	0.1003	-0.0013	0.0045
907	3	.176	.693	70.419	1.5681	.1010	.0002	.0038
907	4	.175	.692	69.975	1.9504	.1000	.0035	.0030
907	5	.175	.691	69.973	2.3712	.0997	.0070	.0025
907	6	.174	.688	69.748	3.0944	.0989	.0109	.0019
907	7	.176	.687	70.638	5.0215	.0992	.0153	.0012
907	8	.175	.682	69.980	8.5417	.0972	.0184	.0007
908	1	.200	.697	80.374	364.1964	.0984	.0191	.0000
908	2	.201	.699	80.579	8.3942	.0982	.0151	.0007
908	3	.202	.703	80.774	4.4561	.1001	.0118	.0013
908	4	.202	.706	80.974	2.9401	.0991	.0079	.0020
908	5	.202	.707	80.979	2.1429	.0993	.0039	.0027
908	6	.202	.708	80.977	1.7116	.1001	.0008	.0035
909	1	.162	.692	65.516	1.5236	.0736	.0005	.0025
909	2	.161	.691	65.265	2.0404	.0744	.0047	.0019
909	3	.161	.688	65.263	3.0161	.0738	.0087	.0013
910	1	.161	.689	65.362	2.7653	.0988	.0116	.0021
910	2	.162	.692	65.594	1.9948	.1001	.0062	.0030
910	3	.163	.693	65.835	1.4908	.0998	.0007	.0040
911	1	.161	.734	69.230	1.4637	.0998	.0014	.0040
911	2	.161	.733	68.997	1.8899	.0996	.0076	.0031
911	3	.161	.730	69.000	2.6292	.0988	.0133	.0022
912	1	.162	.730	69.582	2.6458	.0751	.0113	.0015
912	2	.163	.733	70.043	1.8802	.0740	.0072	.0020
913	2	.161	.735	69.323	1.4929	.0749	.0037	.0026
913	3	.161	.734	69.087	1.9378	.0748	.0078	.0020
913	4	.161	.730	69.085	2.6498	.0738	.0113	.0014
914	1	.200	.753	86.088	3.8700	.0999	.0119	.0015
914	2	.202	.757	86.668	2.5587	.0997	.0072	.0023
914	3	.202	.759	86.693	1.7148	.0997	.0015	.0034
914	4	.201	.758	86.327	1.7226	.1004	.0015	.0035
915	1	.217	.723	87.657	1.8021	.0991	.0013	.0032
915	2	.216	.722	87.304	2.7813	.0993	.0069	.0021
915	3	.216	.718	87.482	5.4895	.0994	.0125	.0011
916	1	.150	.676	60.325	2.8079	.0708	.0082	.0013
916	2	.149	.674	59.707	2.8441	.0854	.0099	.0017
916	3	.148	.673	59.357	2.6270	.0997	.0117	.0023
916	4	.149	.675	59.791	2.2847	.1136	.0131	.0032
917	2	.216	.723	87.466	1.1515	.0434	.0040	.0015
917	3	.216	.722	87.269	1.4866	.0497	.0048	.0014
917	4	.216	.722	87.253	1.5638	.0595	.0040	.0017
917	5	.215	.721	87.035	1.8833	.0707	.0048	.0019
917	6	.215	.722	87.013	1.9606	.0783	.0050	.0021
917	7	.215	.721	86.803	1.8154	.0899	.0043	.0028
917	8	.214	.721	86.772	1.8423	.0993	.0045	.0032

Table X.- Concluded

(b) Concluded

Run no.	Pt. no.	$\mu$	$M_{AT}$	$V_{\infty}$ , knots	FM	$C_L/\sigma$	$C_D^*/\sigma$	$C_O/\sigma$
918	1	0.216	0.722	87.570	0.7818	0.0377	0.0027	0.0017
918	2	.216	.722	87.355	.9956	.0488	.0021	.0020
918	3	.216	.721	87.316	1.2522	.0611	.0019	.0023
918	4	.215	.721	86.930	1.3616	.0716	.0016	.0026
918	5	.215	.721	87.075	1.3917	.0812	.0011	.0031
918	6	.215	.720	87.041	1.3624	.0907	.0002	.0038
918	7	.214	.720	86.687	1.3672	.0910	.0002	.0038
918	8	.215	.720	86.844	1.2928	.0987	-.0009	.0045
919	1	.216	.719	87.618	.6268	.0401	-.0001	.0024
919	2	.216	.718	87.219	.8777	.0531	-.0005	.0026
919	3	.216	.718	87.388	.8942	.0576	-.0018	.0029
919	4	.215	.718	87.178	.9628	.0689	-.0034	.0035
919	5	.215	.718	86.953	1.0778	.0814	-.0037	.0040
919	6	.215	.718	86.925	1.0457	.0903	-.0056	.0049
919	7	.215	.718	86.900	1.0290	.0990	-.0067	.0057
920	1	.217	.762	93.064	.6502	.0403	-.0019	.0023
920	2	.217	.761	93.198	.8118	.0501	-.0028	.0026

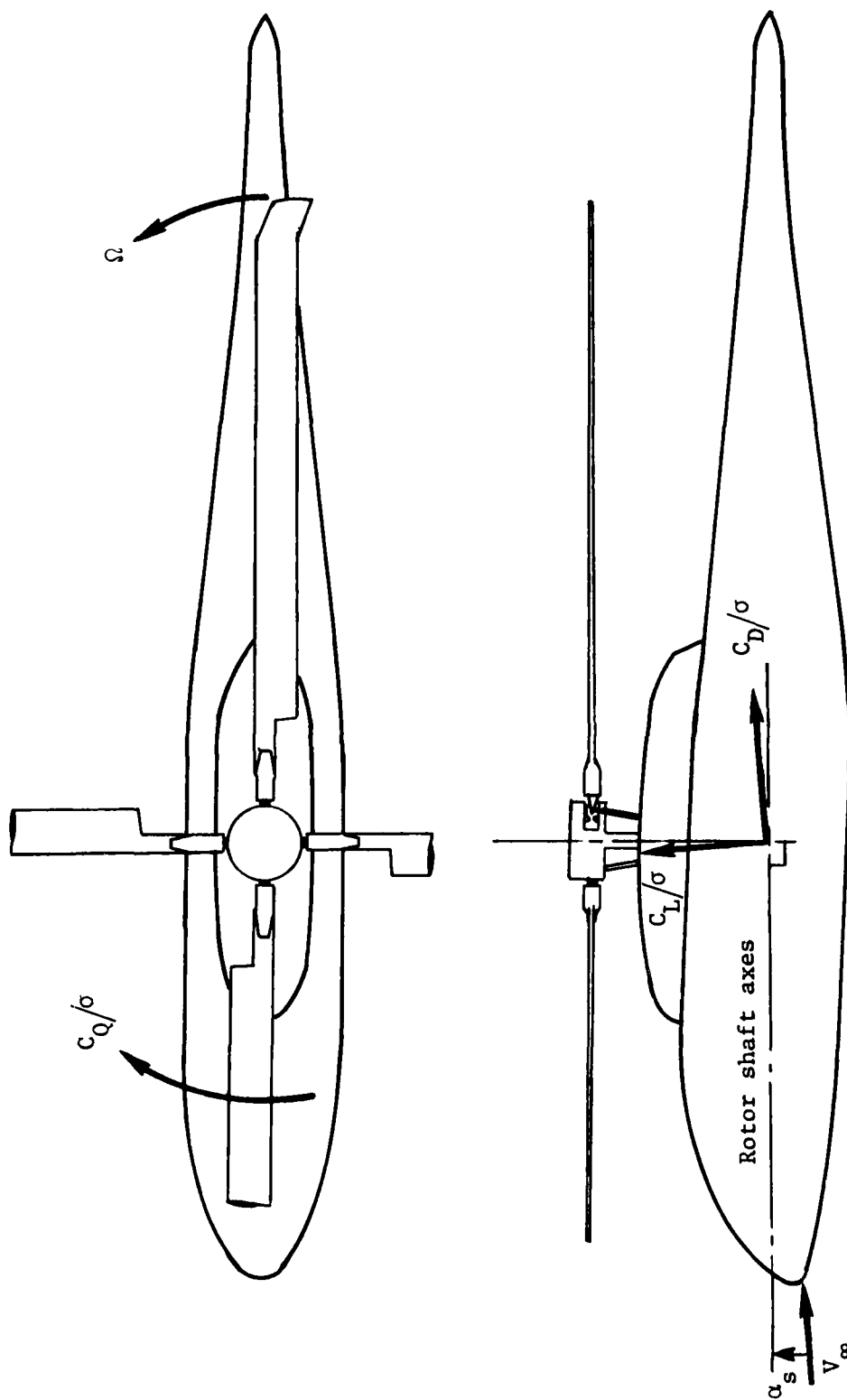


Figure 1.- Sketch of rotor model with axis system.

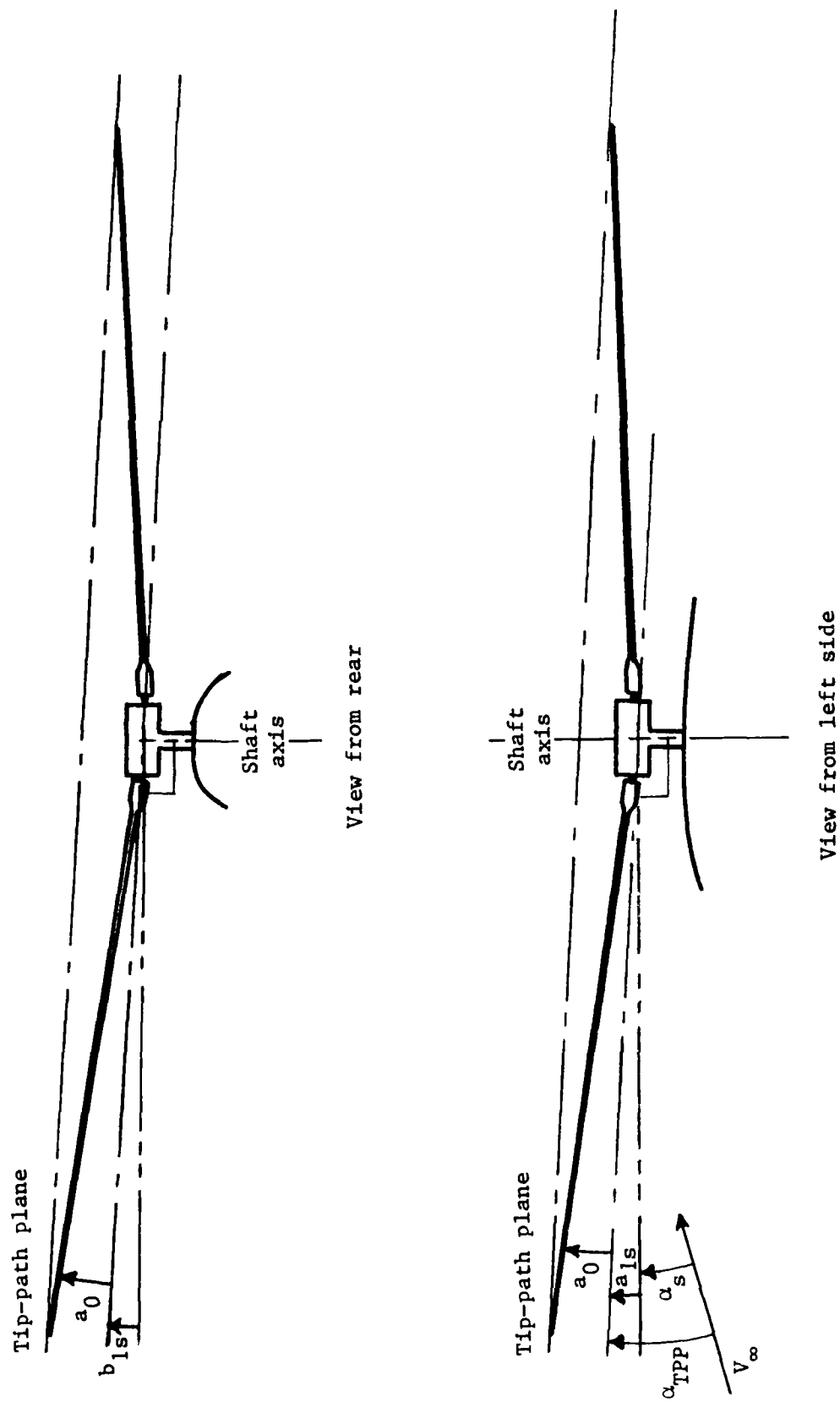


Figure 2.- Sign conventions for rotor flapping.



L-83-7,012

(a) Front view showing acoustic floor treatment.

Figure 3.- Photographs of model installed on sting in Langley 4- by 7-Meter Tunnel.

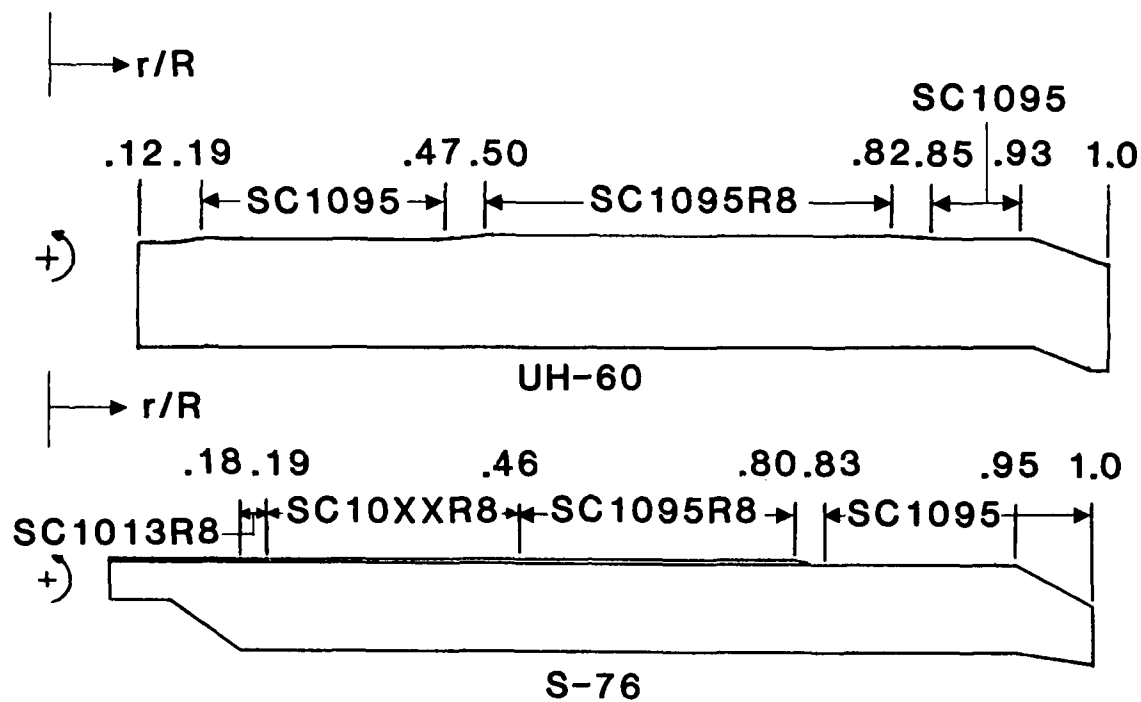


L-83-7,011

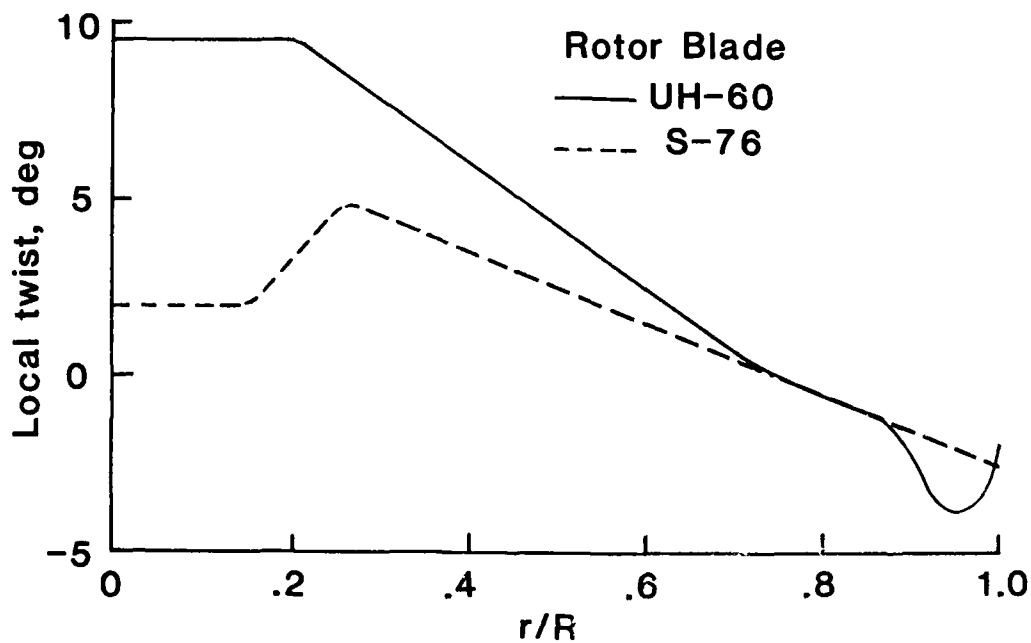
(b) Rear left-quarter view.

Figure 3.- Concluded.





(a) Rotor blade planform.



(b) Rotor blade twist distribution.

Figure 4.- Blade characteristics.

AD-A169 844

ROTOR PERFORMANCE CHARACTERISTICS FROM AN AEROACOUSTIC  
HELICOPTER WIND-TUN. (U) NATIONAL AERONAUTICS AND SPACE  
ADMINISTRATION HAMPTON VA LANG. D R HORD ET AL.  
MAY 86 NASA-L-16078 NASA-TN-87661

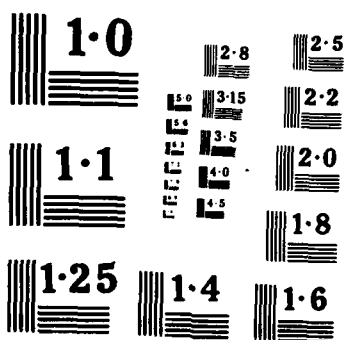
2/2

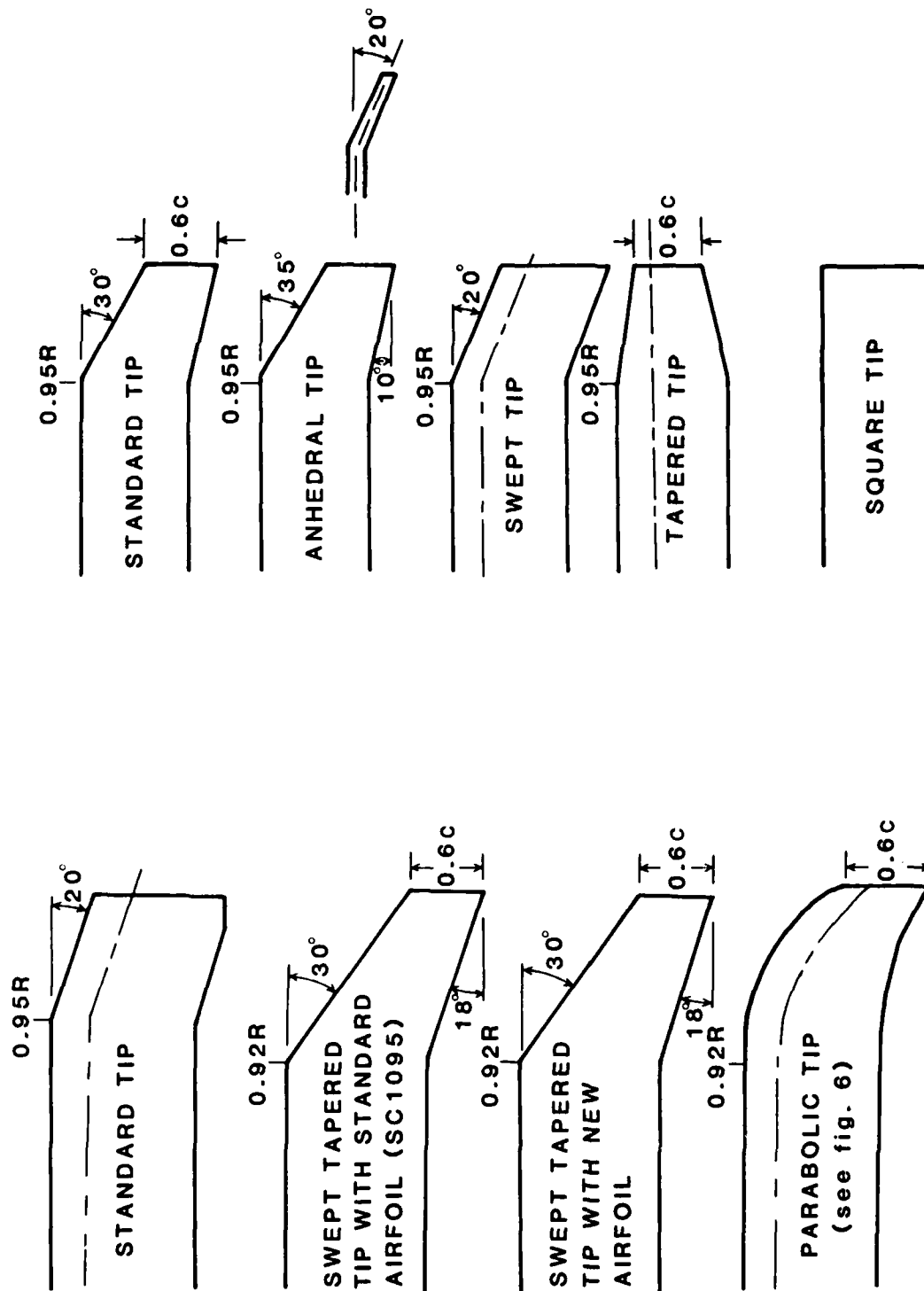
UNCLASSIFIED

F/G 20/1

NL

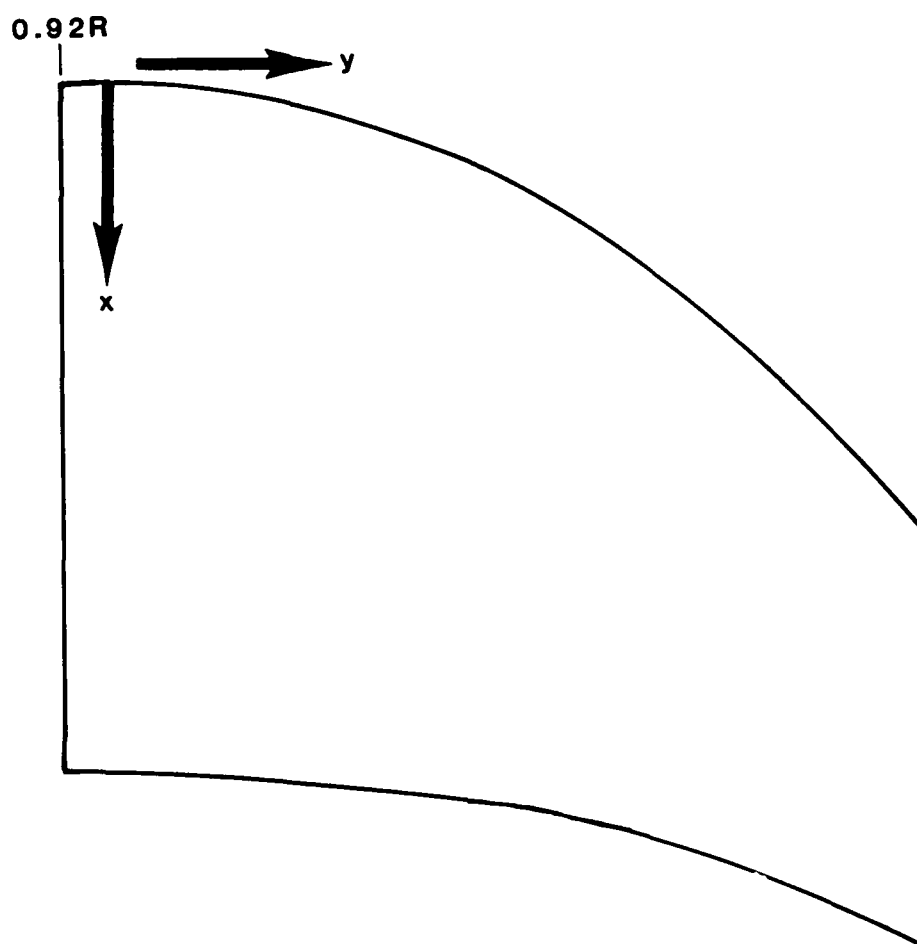






UH-60 ROTOR CONFIGURATIONS      S-76 ROTOR CONFIGURATIONS

Figure 5.- Rotor tip configurations.



Leading Edge		Trailing Edge	
x	y	x	y
-0.188	0.0	-0.188	-3.625
0.0	0.0	0.0	-3.625
1.0	-0.1	1.0	-3.65
2.0	-0.42	2.0	-3.78
3.0	-1.05	3.0	-4.00
4.0	-2.00	4.0	-4.38
4.31	-2.35	4.31	-4.53

Figure 6.- UH-60 parabolic tip details.

1. Report No. NASA TM-87661 AVSCOM TM 86-B-1		2. Government Accession No. <b>AD-A169844</b>		3. Recipient's Catalog No.	
4. Title and Subtitle Rotor Performance Characteristics From an Aeroacoustic Helicopter Wind-Tunnel Test Program		5. Report Date May 1986		6. Performing Organization Code 505-61-51-10	
		8. Performing Organization Report No. L-16078		10. Work Unit No.	
7. Author(s) Danny R. Hoad, Joe W. Elliott, and Nettie M. Orie		11. Contract or Grant No.		13. Type of Report and Period Covered Technical Memorandum	
9. Performing Organization Name and Address Aerostructures Directorate USAARTA-AVSCOM Langley Research Center Hampton, VA 23665-5225		14. Army Project No.  1L162209AH76			
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Washington, DC 20546-0001  and U.S. Army Aviation System Command St. Louis, MO 63120-1798		15. Supplementary Notes Danny R. Hoad, Joe W. Elliott, and Nettie M. Orie: Aerostructures Directorate, USAARTA-AVSCOM.			
16. Abstract  An investigation of helicopter rotor noise at model scale has been conducted in the Langley 4- by 7-Meter Tunnel. The program described in this report was the first of a planned three-phase project, whose purpose was to examine the characteristic noise mechanism involved in main rotor/tail rotor interaction noise. This first phase was conducted with a main rotor only in order to identify the characteristic noise generated by only the main rotor. This report defines the aerodynamic operating conditions of the rotor system during the test. The acoustic data are properly referenced.					
17. Key Words (Suggested by Author(s)) Helicopter model Wind tunnel Performance Aerodynamics Acoustics			18. Distribution Statement Unclassified - Unlimited  Subject Category 02		
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 97	22. Price* A05		

END

DT/C

8-86